PETROLEUM WEEK

JULY 12, 1957

A McGRAW-HILL PUBLICATION

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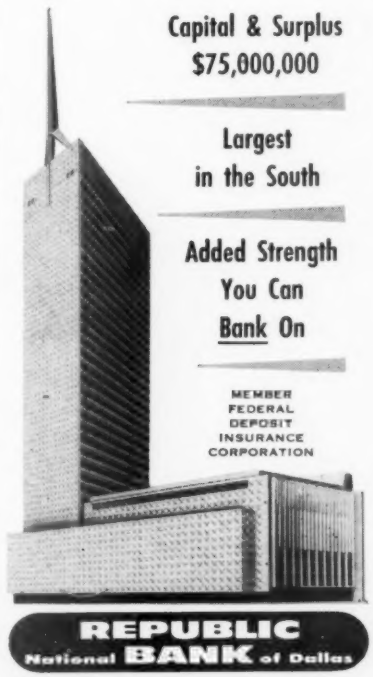

Good Wells Make Good News

July 12, 1957

FRACTURING TREATMENTS often give better results when acid is used as part of the treatment. Here are four recent examples showing different ways Dowell has used acid to improve fracturing results.

- **Coleman County, North Texas** (Old Well): Production has declined to 3 bopd from well completed in Capps lime through perforations at 1907 to 1935 feet. Earlier treatments had been unsatisfactory. Dowell fractured with Riverfrac* using 20,000 gallons of water containing three per cent acid, F.L.A.* (Fluid Loss Additive), a de-emulsifying agent and 20,000 pounds sand. Injection down casing at 25 bpm. *Well stabilized at 20 bopd after treatment. As a result of success with this treatment, drilling was resumed in field.*

- **Caddo Parish, Louisiana** (New Well): Drilled into highly soluble Fredericksburg lime, 2374 to 2378 feet, in field where most wells are strippers. 1000-gallons Dowell acid spearhead was followed by Acid Petrofrac® using 10,000 gallons acid-in-oil emulsion and 20,000 pounds sand. Injected at 1800 psi and 25 bpm down casing. *After five days, well had produced 1000 barrels oil and was flowing through choke at 75 bopd.*

- **Matagorda County, South Texas** (New Well): Completed in Frio sandstone through perforations 8902 to 8924. Before fracturing, drill stem tested 680 psi on ¼-inch choke. Dowell provided Stratafrac®, using 12,000 gallons acid-kerosene emulsion with 30,000 pounds 60-80 mesh sand. Injection down 2-inch tubing at 6000 psi, 2½ to 5 bpm. Following treatment, well tested 1750 psi on ¼-inch choke and is now *producing 2000 mcf gas and 82 barrels distillate per day.*

- **Fort St. John, British Columbia, Canada** (New Gas Well): Drilled into Triassic "D" sand with perforations 4691 to 4709 feet. Well tested 18,000 mcfpd open flow. Dowell performed fracture treatment using 500 gallons Mud Acid followed by Petrofrac® using 20,000 gallons emulsified diesel oil with 20,000 pounds sand. Pumped down 2½-inch tubing through packer 4600 psi at 7 bpm. *Following quick clean-up, well tested 137,000 mcfpd open flow.*

These are just samples of the wide range of fracturing treatments provided by Dowell for good results in any formation. For more information or service, call any of the 165 Dowell offices in the United States and Canada; in Venezuela, contact United Oilwell Service. Or write Dowell Incorporated, Tulsa 1, Oklahoma.

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60-Second Summary / WHAT'S HAPPENING IN OIL

AT-A-GLANCE PETROLEUM WEEK Copyright

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dept/INDEX

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Steadily lengthening payouts indicate strongly that drilling in the U. S. may have passed its peak. The longer payouts are due primarily to lower allowables. The result is that independents find it harder to finance new wells, and more companies are going abroad, where payouts are more attractive. . . . p. 19

•

Pressure is mounting in some states for changes in proration methods to reduce exempt oil. The volume exempted from strict allocation is rising fast. It puts a pinch on already tight allowables. . . . p. 9

•

The recent 0.2¢-a-gal. hike in gasoline prices may provide a peg for another investigation of oil. The Kefauver subcommittee started hearings on "administered" price increases this week. Steel is the No. 1 target, but oil may be dragged in. . . . p. 16

•

Superior Oil appears to be the first of the "newcomers" to strike oil in Venezuela's Lake Maracaibo. Two of its wildcats each found more than 300 ft. of oil sands. . . . p. 33

•

South Dakota's three-year drought of new producers may be nearing an end. Encouraging tests of a Shell well are creating revived interest in drilling in the state. . . . p. 22

•

Refiners may make a big share of the butadiene that will be needed in increasing amounts for rubber. Butadiene processing looks more attractive now that a new technique makes it possible to make either butadiene or alkylate. . . . . p. 42

•

Canada's natural gas industry—from producers to distributors—will spend about $2-billion in the next five years. That's one estimate of new facilities needed. More than $600-million will be invested in new transmission lines. . . . p. 50

•

Esso Research is creating a new advancement system for scientists who want to stay in technical work. The plan provides "equal advancement" chances for technical and administrative personnel. . . . p. 36

•

Standard of Indiana will boost the capacity of its Wood River (Ill.) refinery by 30% to 67,500 b/d. A new crude unit and a 30,000 b/d cat cracker will be built to replace existing units. . . . p. 15

•

Improvements in accounting methods and in personnel policies are the two greatest needs of jobbers, a survey of 200 key jobbers and marketers shows. . . . p. 48

Up to the Minute / SIGNIFICANT LATE NEWS

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July 12, 1957

Price cutting was the trend in petroleum markets around the world this week. In the U.S., middle distillates prices dropped 0.2¢ to 0.4¢ a gal. The cuts were made primarily in the East and Southeast, but parts of the Midwest were also affected. Lower distillates prices came as no surprise. Discounts have been common for weeks.

Only gasoline now is holding the 0.2¢ a gal. advance made recently to offset higher costs to refiners. But sales are slow in the primary markets, despite the volume of refining capacity closed by strikes.

In the Far East, all light products were cut 0.25¢ a gal. And industrial fuel oils were trimmed 15¢ a bbl.

Crude prices in Southwest Texas and Venezuela were adjusted downward by more companies. Humble, Sinclair, and Suntide joined Atlantic and Southern Minerals in cutting light and heavy crudes in amounts ranging from 5¢ to 18¢ a bbl. In Venezuela, Socony met the 5¢-a-bbl. cut for San Joaquin crude made by Creole last week.

•

Texas Eastern Transmission Corp. directors have voted to acquire La Gloria Oil & Gas Co. The $70-million deal, in which one share of Texas Eastern common stock will be offered for one share of La Gloria, will have to be approved by La Gloria's stockholders. No hitch is likely.

This is part of Texas Eastern's planned expansion and diversification program. La Gloria, a supplier of Texas Eastern, is primarily an oil and gas producing company.

•

Fate of the natural gas bill is up to House leaders now. The bill cleared one hurdle this week when the House Commerce Committee approved it, 15-13. Now it goes to the Rules Committee, which clears legislation for floor action. The committee is evenly split on the issue, but the weight of Speaker Sam Rayburn is expected to be enough to push it through.

Proponents are cautiously optimistic about final House approval. But some opponents still insist they will beat the measure on the floor. Thus far, the bill has escaped major amendments.

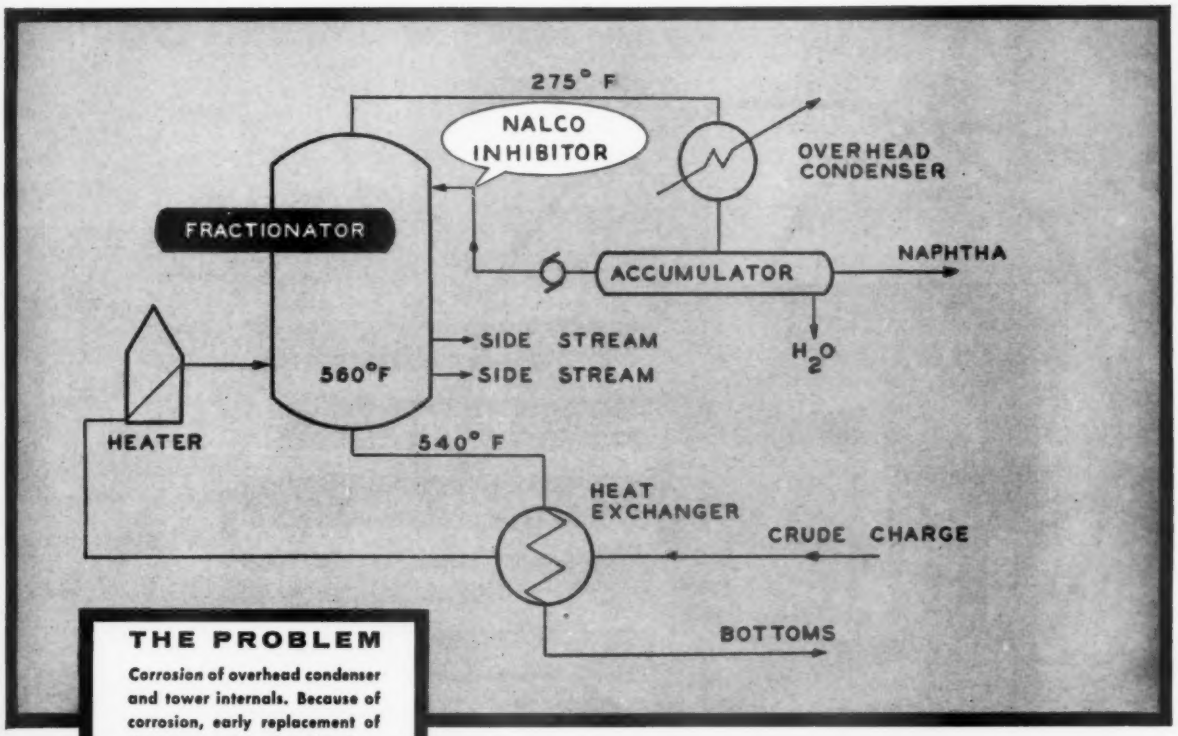
•

More Outer Continental Shelf areas may become available for oil leasing. A bill to require congressional approval for all military withdrawals of public and offshore lands in excess of 5,000 acres is in final committee stage in the Senate. It has already passed the House. Meanwhile, the Interior and Defense Depts. are near agreement on a plan whereby the military would remove from target-range designation areas that were selected by Interior for leasing.

•

The six-man Cabinet committee plans to report on oil imports before the end of July. That's what its chairman, Sinclair Weeks, told a Senate Committee this week. He wouldn't indicate what action will be proposed.

HOW *Nalco* INHIBITORS CUT DOWNTIME 74% ... AND SAVED THIS FRACTIONATING TOWER



THE PROBLEM

Corrosion of overhead condenser and tower internals. Because of corrosion, early replacement of the tower was contemplated.

THE TREATMENT

Nalco Corrosion and Fouling Inhibitor applied into overhead reflux.

THE RESULT

In this case only one point of application protected both fractionator and overhead equipment. Iron in accumulator water brought below 0.5 ppm as compared to previous 100-150 ppm. Corrosion and plugging stopped, tower saved, and downtime for cleaning reduced by 74%.

EFFECTIVE Nalco corrosion control is very low-cost protection. For example, this refinery not only avoided the cost of a new tower, but cleaner tower internals actually resulted in better fractionation and higher quality products. If you would like further facts on Nalco Corrosion and Fouling Inhibitors, ask your Nalco Representative or write direct.

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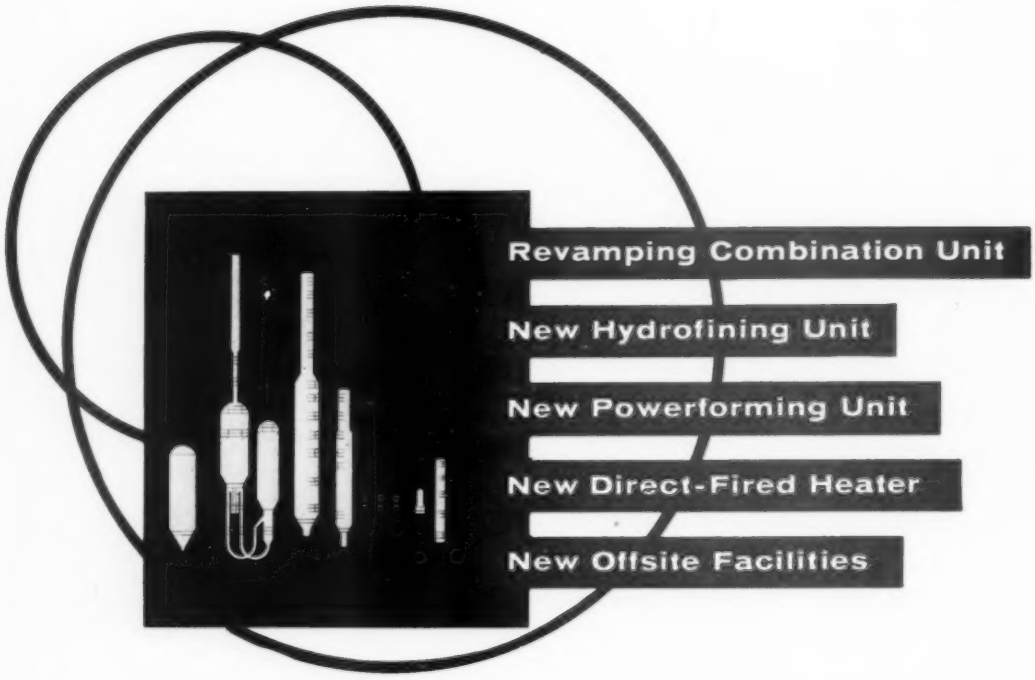

Foster Wheeler Corporation, builder of the original Durban refinery for Standard-Vacuum Refining Company of South Africa, Pty. Ltd., will design and construct all major process units for this expansion project. The new units and revamping of existing facilities will improve both quality and yield of the refinery's full range of fuel products and asphalts.

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Proration Methods Get New Study

The increasing pinch on allowables is creating new pressure on state regulatory bodies to consider possible revisions in proration methods, particularly where exempt production is involved.

The exempt oil is production that is excluded from strict allocation under the proration formulas in the major states. It consists of oil produced primarily in marginal or stripper wells and from various secondary recovery projects.

And in Texas, discovery wells are also included on the exempt list, for a maximum of 18 months.

Exempt allowables will come up for discussion again starting next week as state regulatory bodies begin their hearings to determine allowables for August.

An important hearing on August allowables is that of the Texas Railroad Commission in Austin next Friday. Texas has by far the biggest volume of exempt production (chart, above).

And if further cuts in allowables are made (the state has only a 13-day producing schedule for July), the exempt allowables may well come under attack again.

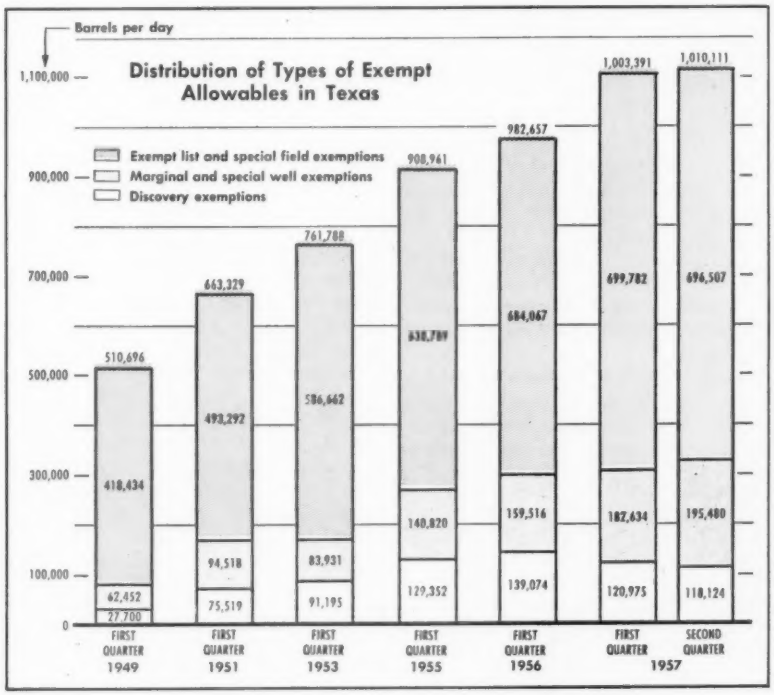
The problem is caused by the fast growth in exempt production, which leaves state agencies with little room to make cutbacks in allowables during periods of oversupply.

The many exemptions to prorated production in the major states in effect create a floor under allowables. And in many of the states, it would require a state legislative act to permit any change in the minimum allowables created for the exempt wells.

• In Texas, the exempt allowable now amounts to 1,103,194 b/d, or one-third of the initial calendar day allowable for July.

And the exempt allowable has been rising fast in Texas—despite frequent redeterminations by the Railroad Commission, which reduce the exemptions on wells that can't make the assigned maximum production.

• In Oklahoma, about 54% of the state's allowable is assigned to "unallocated" pools, each of which now has a top allowable of 20 b/d per well.



Production from the unallocated, or exempt, areas is on a lease basis.

• In Kansas, more than half of the state's production is from exempt wells. And as more wells go on secondary recovery production methods, or just become marginal producers because of natural declines, the exempt production will increase.

• And Louisiana, which has no wells that are in an exempt allowable category, last month had to cut the form of bonus allowable given to dual producers. Dually completed oil wells previously had received a double allowable. Now such wells are assigned an allowable equal to only 1½ times that of a singly completed well.

The problems of exempt production will increase as more wells enter the declining stages of production and qualify for exempt allowables.

About 400,000 of the 555,000 producing oil wells in the U.S. already are classed as stripper wells.

Too, conservation-minded states are encouraging more secondary recovery projects. And while these result in greater ultimate recovery of oil, they create problems in the states that exempt secondary recovery projects from normal allowables.

There is considerable pressure within the industry for prorating waterflood secondary recovery projects on the same basis as other fields. The subject was debated at the recent midyear meeting of the Interstate Oil Compact Commission (PW—Jun.14'57,p16).

As the burden of holding state total allowables down falls more heavily on primary producing wells, there are demands being made to restudy existing proration methods.

Several years ago, Texas tried a depth-bracket method of proration, known as the "1947 Yardstick." The method generally failed to achieve its purpose, and was soon abandoned in favor of the state's present "MER formula."

Each well has a determined maximum efficient rate of production. And the allowable is determined on a market-demand basis by restricting the number of days that the wells in the prorated fields may produce.

Louisiana operates with a depth-bracket formula. The only exemptions

are the 1½ allowables allowed dual producers and the double allowable assigned to offshore wells.

But even under the Louisiana proration method, the depth-bracket formula has had to be reduced steadily with mounting new production.

Currently, the state's allowable is based on about 37% of the March, 1953, rate.

The recent reduction in the allowable permitted to dually completed oil wells brought demands from some producers that some reduction should also be made in the bonus allowable given to offshore wells.

The problems of changing proration methods are even more complicated than the problems created by exempt allowables.

As a matter of practice, depth-bracket methods or well-MER methods have proved satisfactory in determining allowables in the large producing states.

And, regardless of which method is used, it is the exemptions permitted, rather than the basic proration technique, that create the most serious problems.

Too, production is generally continuing upward in all leading states, regardless of the cutbacks that are ordered to hold output down to market demand.

As the table (below) shows, production this month will be higher in all states than during July of most recent years—except in Texas.

The Texas July allowable represents only 43% of the state's MER, considering the 13-day production schedule.

But as Railroad Commissioner Ernest O. Thompson commented recently, July production in Texas will be several times the volume in 1932, when the price in the East Texas field was 10¢ a bbl.

"So maybe we are not doing so badly as some might think," Thompson asserted. "It just requires a little perspective to see how far we have come."

Hugh Roy Cullen:

Fabulous Oil Finder Dies

Hugh Roy Cullen, who built a mammoth personal fortune in oil-producing properties and then gave away most of it for philanthropic purposes, died last week in Houston at the age of 76.

He died in Hermann Hospital, one of the original units of Houston's $100-million Texas Medical Center, to which he had given more than $1-million. Death was attributed to a cerebral thrombosis—a clot in one of the arteries of the brain. He had been hospitalized since Mar. 23.

In his lifetime, he had discovered several major oil fields, principally in the Texas Gulf Coast area.

These included Rabbs' Ridge, and the Tom O'Connor, on the ranch of the same name. He also was a major developer of the Pierce Junction field, in the Gulf Coast area, the Humble field, and of oil properties in West and Southwest Texas.

Much of his success stemmed from his willingness to drill deep, and to explore deep formations in fields that were supposed to be exhausted.

Cullen got into the oil business around 1910. Descended from English and Scottish colonists, he was born July 3, 1881, in Denton County, Tex. He went to work at the age of 12—for $3 a week. In succeeding years he was in the cotton and real estate business. One of his first oil ventures was in Oklahoma, although his major successes were achieved in Texas.

With Cullen doing the drilling, a partnership was formed with James West, wealthy Texas cattle and lumber man. Their venture was called South Texas Petroleum Co. Organized with $1-million in capital, it earned more than $30-million within six years. Major success was the Rabb's Ridge field, discovered in July, 1930. Shortly afterward, the partners sold their interest in this project, and the partnership was ended.

Two years later Cullen organized Quintana Petroleum Corp. This firm has producing properties in Texas, including its interest in Tom O'Connor field. Quintana handles producing properties that Cullen gave to members of his family in the 1930s.

The man who didn't finish elementary school made institutions of higher learning major beneficiaries of his gifts.

One of the first was $260,000 to the University of Houston for a memorial building for his only son, Roy Gustave Cullen. The son was killed in 1936 when an oil derrick collapsed.

In succeeding years, he gave an estimated $30-million to the university, helped build it from a small, struggling institution to one embracing nine colleges spreading over 250 acres of campus.

In 1947 he established the Cullen Foundation to aid educational, medical, and charitable institutions. It was to receive the income from 18,511 acres of oil-producing land, which he thought would produce 40-million bbl. of oil. The next day he said he had made a mistake; the yield would probably be 80-million bbl.

His wealth was estimated in excess of $500-million, but all he would admit was that he had given away 93% of his fortune after providing for his wife and family.

And his explanation of his benefactions was simple:

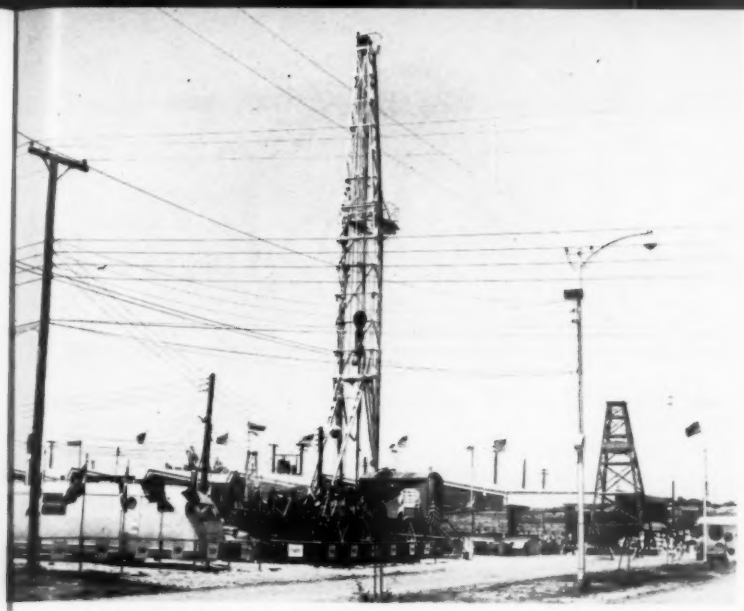
"My wife and I are selfish. We want to see our money spent during our lifetime so we may enjoy great pleasure from it."

July Output of Crude and Condensate

(thousands of b/d)

	1951	1952	1953	1954	1955	1956	1957
Oklahoma	512	535	576	473	550	574	590
Texas	2,782	2,596	2,869	2,622	2,720	3,024	2,850
Kansas	309	326	330	332	340	339	340
New Mexico	144	165	195	207	224	235	260
Louisiana	630	668	707	662	725	780	880
Rocky Mtn.*	284	307	397	464	510	550	590

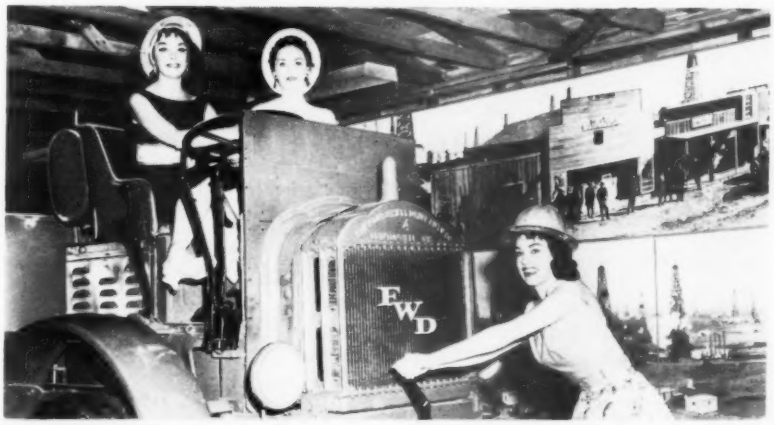
*Includes Colorado, Montana, Utah, Wyoming, and North Dakota.



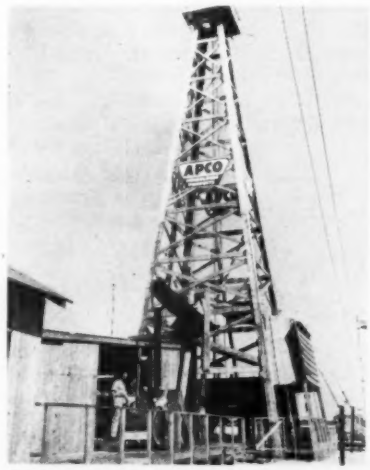
A FAIR STORY of oil in Oklahoma, past and present, was told during the Oklahoma Semi-Centennial Exposition. These two rigs illustrate progress.

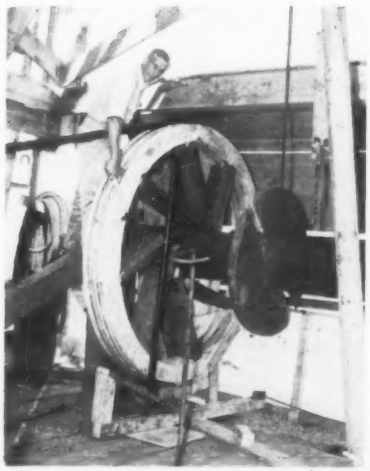
FROM THE PAST, two old-timers recall memories of the fabulous "Wild Mary" Sudik well of 1930.

Oklahoma Show Shows Oil's Key Role



WITH LOTS OF DRIVE, this cementing truck of World War I vintage did its part in the early days—much too far back for these three pretty girls to remember.





THE JOB WAS DONE in the early fields with such rigs as this cable-tool outfit (left), complete with a sturdy "bull wheel" (right). They drew much attention at the show.

Oil's impact on Oklahoma's past, present, and future, was one theme of Oklahoma's Semi-Centennial Exposition at Oklahoma City, which ran from June 14 through July 7.

The oil industry provided exhibits from the pioneer oil days, and demonstrated today's modern equipment. One of the features was a modern rig, which did actual drilling during the exposition. The rig, owned by George E. Failing Co., of Enid, Okla., was completely equipped, even including a blowout preventer.

Many of the fair's 1,500,000 visitors climbed to the platform to see how the drilling was done. For, even in Oklahoma, there were many who had never seen a rig in operation.

(An old-time "doodle bugger," using an electronic version of the old forked tree limb, said oil would be found at 5,700 ft. But the drilling, done for demonstration only, didn't go that deep.)

A replica of an old, wooden cable-tool rig drew many viewers. It was put together by Anderson-Prichard Oil Corp. after months of searching in oil fields and junk yards for the various parts. A usable "bull wheel" was never found, and one had to be made from old blueprints.

This rig did no drilling—for fear of splattering spectators with mud.

A Cities Service exhibit featured the No. 1 Mary Sudik. This historic well, which blew out on Mar. 26, 1930, was not brought under control for 11 days. Before it's career ended, it had produced 800,000 bbl. of oil.

Some Elementary Facts About th

Congress plans to reexamine the 27½% percentage depletion provision. This was made evident recently when a Senate committee questioned Robert B. Anderson before his confirmation as Treasury Secretary. And Anderson made it clear he would cooperate with Congress in a review. Because many people—including some in the oil industry—are unfamiliar with the depletion provision, PETROLEUM WEEK has prepared this simplified explanation.

What is this oil percentage depletion provision in our tax laws that some men in Congress are always making so much commotion about?

Is it good or bad?

Is it a piece of "special privilege" legislation?

Does it enable oil men to evade paying their fair share of taxes?

If it weren't in the law, would the consumer pay less—or more—for gasoline and fuel oil?

Just what is percentage depletion anyway, and why did Congress put it in the law in the first place?

Percentage depletion is a recognition by Congress of four principal things:

- That oil in ever increasing quantities is vital to our way of life and to the national security.
- That oil is an irreplaceable resource which, once used, is gone forever.
- That, because of the great risks involved in discovering and producing more oil, there must exist adequate incentives if men are to be encouraged to go out and search for it.
- That oil constitutes the entire capital of the explorer who finds it, so that, as he produces that oil—unless he finds more to replace it—he is liquidating himself out of business.

It is precisely for these four reasons—plus the further demonstrable fact that the oil finding and producing is so different from other enterprises—that Congress, in 1926, wrote into our tax laws the economic principle of percentage depletion.

What the provision does is simply this: It provides that 27½% of the producer's gross income from only his oil production may be retained by him tax free. Depletion is not allowed on refineries, pipe lines, and marketing facilities. The idea is to assure the producer a sum of money—frequently inadequate nowadays—for plowing back into the risky business of finding more oil, and thereby, if he is lucky, restoring his exhausted capital (crude oil).

By the same token, Congress provided, in effect, that the other 72½% of the producer's gross income is taxable at the regular corporate or individual rate.

Moreover, in practice it doesn't work out that 27½% will always be recovered as nontaxable income.

The maximum percentage depletion on a $3-barrel of crude, today's average price, is 82.5¢. But it ranges all the way down to zero in some cases, and the average of effective depletion for the oil producing industry as a whole is something like 23% rather than 27½%. This is because Congress provided in the law a limitation that the allowance on gross income may never exceed 50% of net income—after expenses, but before depletion is taken.

There is no fundamental difference in economics between the principle of percentage depletion and the principle in our tax laws called depreciation, which allows the manufacturer or other businessman to recover, tax-free, his investment in plant and equipment.

Both have the object of enabling the oil producer or the manufacturer to maintain his capital as nearly whole as possible.

In the case of the oil explorer/producer, the only thing he has to show for his investment is the crude oil he finds. And it is this crude oil which the law recognizes as his capital—capital which, once produced, can never be replaced except and unless the operator discovers a new underground supply.

Unlike the oil man, the manufacturer knows what his money-costs in plant and equipment (his capital) will be. He knows what productive capacity his investment will get him and for how long. He knows in advance the quality characteristics of his plant's output. He can be confident in many instances of being able to maintain a certain level of production indefinitely without any additional capital cost to himself.

Unlike the oil man, he frequently is able to add to capacity at low cost and low risk by expanding existing units of his plant.

Only one exploratory well in nine finds oil. This means that, if the average cost of a wildcat well is $100,000, then, on the average, the oil operator

the Percentage Depletion Provision

must invest $900,000 before he finds a producing well.

Only one well in 44 discovers as much as 1-million bbl. of crude oil, and even this represents only a marginal discovery. This is less than the oil needed to supply domestic demand for three hours.

When oil is found, the oil man cannot be sure that a well classed initially as successful will turn out to be so.

There is the example of Sun Oil Co.'s No. 1 Carl Dynneson, near Sidney, Montana. The day this wildcat well came in, in 1953, at a depth below 12,000 ft., $1,331,000 had been invested in it by Sun. By last winter expenses had run another $89,000, making the total investment $1,420,000, which Sun figured it might get back in nine years.

But that's not the whole story. The casing (oil string) in the well collapsed, as sometimes happens in this hazardous business, and Sun was compelled to drill a second well, this time to 9,700 ft., from which it is getting only 800 bbl. a month production. By the end of 1956, the company's total investment stood at $1,871,000 against a gross income of just $204,000. And today it appears there never will be a payout for Sun from this venture.

About the only thing the oil man can be sure of, after he has made a presumed successful discovery, is that, for every barrel of oil he produces, he is one barrel closer to putting himself out of business at that location.

Quite unlike the manufacturer, who can count (assuming a stable economy) on replacing his capacity when it wears out at about its original cost, the oil man (again assuming a stable economy) can replace his barrel of oil only by finding another barrel, and having to range wider, drill deeper, and spend more money, barrel for barrel, to do it.

Percentage depletion is available to big and small explorers and producers alike.

And it is serving as the principal encouragement to American operators, including many independents, to search out and develop oil deposits overseas, because percentage depletion applies to these activities, too.

Nearly 100 other extractive industries besides oil are allowed to use percentage depletion in figuring their federal tax bills.

They include coal, lead, zinc, sulphur, sand, gravel, and a host of other metals and minerals. One or more of the industries getting percentage depletion are to be found in each of the 48 states of the Union.

The gross percentage depletion rate varies as between resources, with oil at the top at 27½%, and with some as low as 5%. Universally, however, all come under the restriction that limits the amount of allowance to 50% of net income. The different gross rates simply reflect the production cost ratios of the various industries.

There can be no doubt that Congress, in extending the principle of percentage depletion to oil production, succeeded in its objective of stimulating the search for crude oil in the U.S.

Thirty years ago, when the depletion recognition was established, we had in the U.S. only about 8-billion bbl. of proved crude oil reserves. Since then, we have produced 45.7-billion bbl. to meet current demand. Yet as of the end of 1956, we had in the ground, in known oil fields, a proved crude reserve of 30.4-billion bbl.

Even so, there's grave question whether the present 27½% depletion rate is any longer adequate to do the job cut out for it by Congress.

There's no getting away from it—crude oil is becoming harder and harder to find in the U.S.

Last year the net addition to crude oil reserves—1.5%—was the smallest since World War II. It was the fourth consecutive year this has declined. In 1947, the 4,900 wildcat wells drilled by oil explorers found nearly as much crude oil (and other liquid hydrocarbons) as did the more than 12,500 exploratory wells drilled in 1956.

Moreover, the costs of finding more oil are going up. The maximum percentage depletion today is 82.5¢ a bbl., yet the cost of replacing that oil, by finding and developing new reserves, is at least twice this sum. One source estimates that in 1955 it was actually equivalent to $1.83 per bbl. of net crude produced.

According to one good source, the estimated demands for new investment amount to more than three times the expected allowances for depletion at the present 27½%. What this means, in short, is that present rate, which is supposed to protect the capital of the operator from impairment, does not even return the original money cost of new crude oil, let alone its higher value.

There are only three ways of overcoming this inadequacy of the present law:

- By seeking funds from outside sources (which the industry did to the extent of perhaps $643-million for exploration and development in 1955).
- By increasing the depletion percentage (a boost to 39.5% would have been needed in 1955 to enable the industry to generate required capital within itself).
- By increasing crude oil prices (an average increase of 58.8¢ per bbl. based on 1955 requirements).

Hurricane Review: Oil Did a Good Job

HURRICANE DEBRIS littered the Louisiana coastal region after hurricane Audrey swept through recently. Aside from the mess and disruption, however, oil survived the storm reasonably well. And mop-up work soon had most firms back in shape.

HIGH WATER, pushed inland by a tidal wave, swamped many oil installations, such as this tank farm. Although some oil was lost and some tanks damaged, most installations and equipment were in working order shortly after the storm passed.

TOPPLED DERRICKS marked oilfields in the lowlands. But in addition to getting its own damage repaired quickly, the industry was able to help other storm victims.

The oil industry is pretty well pleased with the way it came through the recent hurricane.

There was something akin to a sigh of relief over the manner in which offshore installations passed the storm test. Hurricane Audrey was the first major Gulf hurricane since the offshore build-up.

Most oil firms this week were still taking inventory of damage. However, both offshore and onshore companies report that they feel they got off lightly.

One source who has been checking the extent of damage offshore estimates that oil installations losses would not exceed $5-million.

A spokesman for the Mid-Continent Oil & Gas Assn. puts an estimate of not more than $20-million on all oil damage done by the storm.

An oil company executive points out that there were a lot of intangible costs, such as the expense of extra transportation needed to get the men ashore before the hurricane. Also, there was considerable overtime pay.

The oil industry incurred a great deal of expense in its rescue operations in the disaster-struck Cameron (La.) area.

Almost all companies in that region helped during the tragedy, sending in boats, men, and helicopters to aid the stricken community. Oil company doctors and nurses helped with the injured.

The activities of the CATC group personnel in the aftermath of Audrey's fury is an example of how the industry pitched in to help.

The CATC crew boat, the La Fourche, was the first boat into Cameron after the hurricane passed. It left Lake Charles about midnight of the day of the storm to carry food, supplies, water, and equipment. It returned to Lake Charles about 10 a.m., carrying 18 survivors.

Taking on more supplies, the boat carried 125 people—doctors, nurses, civil defense officials, policemen, and others—to Cameron. The boat then remained at Cameron, acting as a ferry across the river.

The crew boat Offshore Orleans arrived at Cameron shortly after the storm, and took 115 survivors to Lake Charles.

The work of a helicopter pilot, Travis Rhodes, has also been cited. Rhodes, a pilot for Magnolia Petroleum Co., flew his machine through a 52-hour ordeal of rescue work.

What's New / IN THE INDUSTRY

Oil Firms to Enter Gas Transmission Field

Two oil companies are planning to enter the interstate gas transmission field—one that oil firms have avoided so far because of Federal Power Commission regulation.

The two companies—Warren Petroleum Corp. and Monterey Oil Co.—have joined with J. B. Butler, Houston consulting engineer, to form Trans-Western Pipe Line Co. The new company plans to build a gas line from the Four Corners area to an undisclosed point on the California border.

So far Trans-Western, of which John McMillan, Monterey executive vice-president, is president, is not saying who its potential customers are.

Southern California Gas Co. and Southern Counties Gas Co. in Los Angeles, and Pacific Gas & Electric in San Francisco all purchase their out-of-state gas from El Paso Natural Gas Co. The latter is the major buyer of gas in the Paradox and San Juan Basins of the Four Corners area.

Trans-Western reportedly is considering an industrial consumer as a sole customer, rather than utility buyers.

The company would be able to serve an industrial customer directly (rather than through utility firms). Thus, it may be subject to FPC regulation only on its gas transportation charge and not on the field price of its gas.

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New Florida Pipeline

An independent pipeline company will join an oil-company shipper for the first time, to build a 60-mi. products line in Florida.

The line from Port Everglades to a new terminal west of Miami will be operated by the newly formed Everglades Pipe Line Co., of which Buckeye Pipe Line Co. and Cities Service Co. are principal owners. Other companies operating in the Miami area will be "associated" in the Everglades line.

•

Indiana Standard Plans

Standard Oil Co. (Ind.) will start a major expansion and modernization program at its Wood River (Ill.) refinery, boosting capacity by about 30%.

A 67,500 b/d crude distillation unit will be built to replace the existing 51,200 b/d of crude charging capacity.

A 30,000 b/d fluid catalytic cracker will be built to replace the existing 25,700 b/d of operating and shutdown catalytic and thermal cracking capacity.

Site preparation will begin immediately, and construction is expected to start within about three months.

Arthur G. McKee Co. is the prime contractor for the new facilities.

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Computing Market Data

Esso Standard Oil Co. will build a marketing data-processing center near Baltimore to serve all of the company's sales divisions in its 18-state East Coast territory.

Marketing data will be sent to the computing center by Esso's ten sales divisions by leased wire. Information will be compiled or evaluated and returned by wire to the sales division offices.

The new center will be equipped with an International Business Machines 705 electronic computing system. It will process sales invoices, payrolls, stock accounting, and sales reports.

Esso says it will be about two years before the center is in operation.

New Well "Blows In"

A Tidewater Oil Co. well near Long Beach, Calif., blew in as a burning geyser last week. Intense heat melted the derrick. Downhole heat reportedly ignited gas at 1,500 ft.

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Remington Rand is out with a new electronic punched-tape typewriter, designed to feed information into an integrated data processing system.

(Some oil companies have laid the groundwork for extensive systems of this kind.)

The machine is used as an ordinary electric typewriter in the preparation of source documents, such as sales orders. At the same time, it can translate the data into punched tape for later automatic processing. It thus "captures" the original labor, making retyping of data unnecessary. The machine can also read, and type out at 120 words a minute, information punched on tape elsewhere.

Cost (plus tax): about $3,200 with both punching and reading units; about $2,300 with one or the other.

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Merger talks between Home Oil Co. and Merrill Petroleums are now stalemated, according to a midweek report. Earlier, a consolidation to form one of Canada's strongest independents appeared likely (page 40).

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Texas Eastern Transmission Corp. expects to have the Little Inch pipeline reconverted to products service by September.

Substitute gas facilities will be ready to replace the line in August.

•

A special investigating committee of the Louisiana State Mineral Board has started a study of the development of all state-owned lands.

The committee will reivew state leases, to find out if the fields have been developed in accordance with the lease terms. If discrepancies are found, the committee will recommend action to the board.

The committee will focus attention on leases where oil has been discovered but not developed, with the object of recovering lands which have been neglected by companies.

In addition, the committee will decide if the usual form of state lease is still applicable to the needs of the industry and the state, in terms of modern oil and gas field exploration and development.

Looking Ahead in Washington

McGraw-Hill
Washington
Bureau
July 12, 1957

The new gasoline price increase posted by some firms in some areas is causing rumblings in Washington. Reaction over the 0.2¢-a-gal. step-up is minor compared to the uproar that followed last winter's 1¢-a-gal. increase. But it's worth watching. Already, the Federal Trade Commission has promised to look into complaints about somewhat higher increases reported in Phoenix, Ariz.

The increase is being eyed by Senate antitrusters. The Kefauver subcommittee opened hearings this week on "administered pricing" industries—that is, those industries where prices do not fluctuate with supply and demand. The steel industry is target No. 1, but committee sources say oil will be dragged in to some extent. Note statements by the Oil, Chemical & Atomic Workers Union denying that its 6% wage hike made the new price increase necessary.

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Importers are standing fast in the face of restriction threats. Sources close to President Eisenhower say he will impose quotas of tariffs on crude imports only as a last resort—that he prefers a new try for realistic voluntary restraints. However, Defense Mobilizer Gordon Gray, who is to advise the President whether the voluntary approach is feasible, has concluded his study. And it shows importers have little inclination to cut below the 1.2-million b/d estimated earlier for the last half of 1957. This is bound to have an impact on the conclusions of the special Cabinet group.

Jobbers warn that oil import restrictions will mean higher prices. In a letter to President Eisenhower, the National Oil Jobbers Council asks that the Cabinet committee hold new hearings before making its recommendations to the President. NOJC General Counsel Otis Ellis warns that restraints will mean higher prices for petroleum products, "thus aggravating the spiral of inflation which is currently plaguing our economy."

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A coal industry split may help put the gas bill over in the House. The National Coal Assn. says it will oppose the measure down the line, unless amendments backed by the industry are tacked on. However, the amendments—aimed at prohibiting "below cost" sales of natural gas—already have been voted down in committee, and powerful elements in the coal industry favor the gas bill as written on the ground that coal will gain—not lose—from the measure.

•

The future of the Rifle (Colo.) oil shale plant is up in the air. Congress voted $130,000 for Bureau of Mines maintenance of the facility. But the Senate refuses to go along with the House order that the plant be sold or otherwise disposed of. Congress will probably settle the controversy next year by choosing between opposing bills—to let the Bureau of Mines reopen the plant, or to allow the Navy to farm out the operation to private enterprise.

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Rep. Wright Patman is trying to resurrect S. 11. The Texas Democrat, chief backer of this measure to restrict the use of "good faith" as a defense against charges of price discrimination, has begun filling the Congressional Record with arguments in behalf of the bill—now stalled in a Senate committee.

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12, 1957

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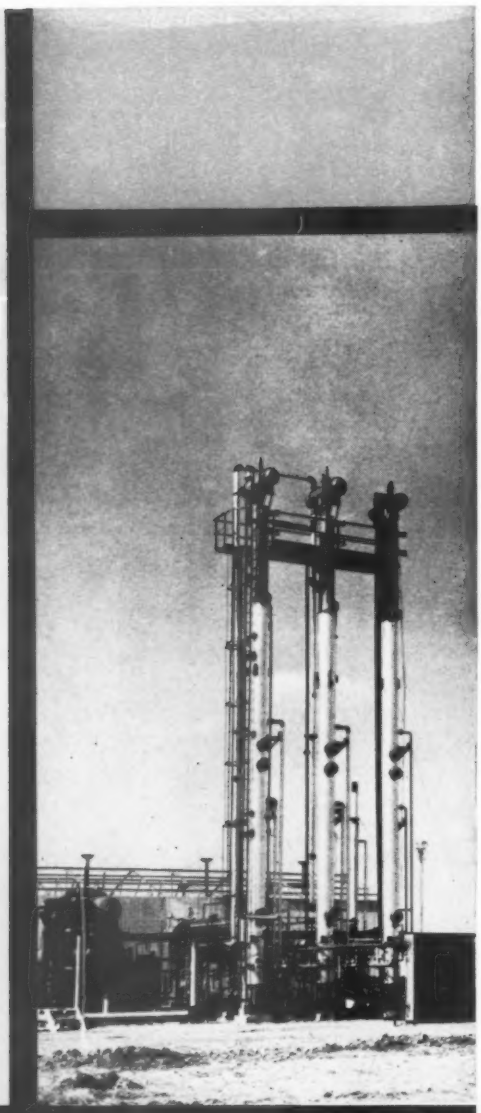

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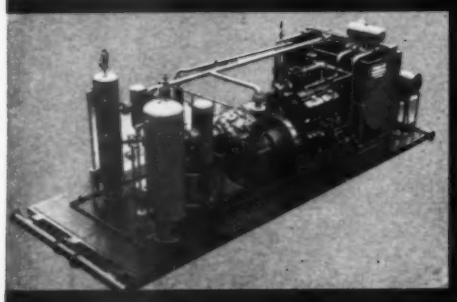

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Drilling: Can It Bounce Back Again?

- **Completions are down about 10% in 1957's first half. Second half will be better, but year's total will be down. Some fear this downtrend may continue.**

- **Oil men say longer payouts are the nub of the problem. This makes financing costly and harder to get.**

Drilling in the U.S. may have passed its peak.

At least that's the opinion of some of the nation's leading oil bankers and several oil men interviewed by PETROLEUM WEEK.

The general conclusion that can be drawn from the talks is that last year's completion of 58,271 wells, totaling 234.4-million ft. of hole, may prove to be the all-time record in the U.S.

The conclusion is not just based on the current year's statistics, which show that completions in the first half are running nearly 10% behind a year ago. This performance is viewed generally as just a part of a long-term trend.

"If the present trend continues in the domestic oil industry, we may have passed a peak in drilling in the U.S." That comment from Eugene McElvaney, senior vice-president of the First National Bank in Dallas, is typical of the statements made to PETROLEUM WEEK this week.

This pessimistic outlook for future drilling in the U.S. is due to the steady lengthening of the payouts on wells completed.

Most banks, in making oil production loans, formerly considered 28 months to 36 months as maximum payouts on loans. But the average payout is growing longer. Today some loans are being made that require upwards of five years for a payout.

I. Causes of Longer Payouts

Lower allowables, due to the high rate of imports, are cited as the most important influence on lengthening the payouts on U.S. wells.

Each cut in the permissible rate of flow means that producers have to add to the time it takes to pay for their drilling ventures.

Another factor adding to the longer payouts is an inadequate price for crude.

Says one Southwest banker: "Even considering the January modest increase, the present price isn't sufficiently attractive, because of constantly rising costs."

And since the last crude price increase, he notes, oil country tubular goods have been raised twice (PW—Jul.5'57,p9).

While not all oil men will agree, these bankers say that many wells have been drilled that had only a slim chance of an economic payout.

II. Effects of Longer Payouts

One reason longer payouts are curtailing U.S. drilling is because independents are finding it harder to finance new wells.

"The restrictions on production have left the smaller operators with insufficient money to drill wells," says Marshall Fagin, of the oil loan department of Southwestern Life Insurance Co., Dallas. Drilling will be curtailed, he says, because the independents will be forced to stay small and live within their incomes.

The longer payouts have resulted in the introduction of a new banking practice: requiring producers to maintain cash balances in order to get production loans. It's a practice that hits independents a hard blow.

Historically, oil in the ground has been sufficient collateral for production loans. And independents have traditionally operated with extremely low cash positions.

Glenn M. Forgan, vice-president of the First National Bank of Chicago, commented at the recent Texas Independent Producers & Royalty Owners Assn.'s annual meeting: "Speaking quite frankly, oil and gas producers have been very good borrowers, but very poor depositors."

And as payouts have lengthened, a growing number of lending institutions have required borrowers to maintain cash balances of from 10% to 25% of the amount borrowed.

This practice reduces the amount of money available to independents —which, of course, curtails drilling. And it also increases interest rates.

On a $1-million loan, for example, a producer may be required to maintain a cash balance of $200,000. And while the loan may carry an interest rate of 5%, the true interest rate will be much higher, since only $800,000 of the loan is available for use by the producer.

Too, the lending institutions are far more selective in making oil production loans. One large insurance lender will permit payouts of between five and ten years. But to qualify, the property used for collateral must have a productive life of from 15 to 30 years at the present rate of production.

This firm also requires a cash balance of between 10% and 25%.

Another reason longer payouts are curtailing U.S. drilling activity is that they're forcing more companies—even the smaller ones—to invest more of their drilling dollars abroad, where the payouts are more favorable.

The rush of the small- and medium-sized U.S. companies into Venezuela when new concessions were offered is a good example of a trend toward greater foreign activity at the expense of U.S. drilling.

Some companies whose total capital budgets run around $5-million now plan to spend as much as $1-million in drilling outside the U.S.

III. Short-Term Rise Seen

A nationwide survey by Petroleum Week points to a step-up in drilling activity during the next six months.

While the majority of major companies and independents interviewed said they were planning greater activity in the second half of the year, many said they would continue drilling at about the same pace, or less.

Drilling bounced back a little in June, but the half-year total of well completions is still down about 10% from the same period last year. And rigs active are down more than 7%.

About 26,000 wells were completed in the U.S. during the first six months of this year, compared with 28,892 in the same period last year.

The number of rigs active in the U.S. for the week ended June 24 was 2,580, a new high for the year, compared with 2,708 at the same time last year. The biggest declines were posted in Illinois, Oklahoma, Colorado, California, Kansas, Louisiana, Montana, Wyoming, and Texas.

In Canada, the total number of rigs

". . . some areas will wind up the year with a net increase in completions . . ."

DRILLING starts on p. 19

that were active dropped from 235 to 216.

The June high compares with the six-year low of 2,233 rigs active in the U.S. for the week ended May 6.

Despite the projected higher level of drilling activity in the second half, it's a safe bet that total well completions for the year will be below the record number of 58,271 wells drilled last year.

Even if the second half this year should exceed the second half of last year, the increase will not be big enough to offset the decline of the first six months, according to the PETROLEUM WEEK survey.

IV. Impact Will Vary

The Petroleum Week survey shows that the second-half upturn will not apply generally. And some areas will even wind up the year with a net increase in completions.

As could be expected, increases will be chalked up in those states in which new interest has focused. But many of the older producing sections, such as Texas, Oklahoma, Illinois, and the like, are going to show declines.

The Gulf Offshore area, however, will continue as a major target.

Although the returns from offshore drilling haven't even approached the point of matching expenditures, the major companies will continue active there.

Up to now, operators have invested more than $1.5-billion in offshore operations, but income production has been only about $250-million (PW—Feb.22'57,p41).

The Four Corners area, where Utah, New Mexico, Colorado, and Arizona join, also will show a big jump for the year.

The Utah portion of the Paradox Basin will get most of the increase. The number of rigs active in Utah jumped more than 100% in the first half this year, compared with the same period last year—from 21 to 45.

Yet even here, the increase will not affect all companies. One major, for example, had budgeted 100 wells for the area. This has been reduced to 36, of which 24 already have been drilled, leaving only 12 to go.

A major that has been very active in the Paradox Basin reports it plans 25 wildcat and development wells in the second half this year, compared with 10 in the first half. In the last half of 1956, this company drilled 5 wells.

In Texas, the outlook for the second half is loaded with contradictions. First half totals were down from last year. But it may go either way in the second half.

Oil well completions are down from 8,469 in the first six months last year to 7,989 this year. Drilling permits have declined from 12,379 to 11,129.

Humble Oil & Refining Co. plans to drill between 880 and 890 wells this year, a little less than last year's total.

John Mitchell, of Christie, Mitchell & Mitchell, says his company drilled 170 wells last year. In the first five months this year the company drilled 42 wells. And it is planning to drill about 90 more the remainder of the year.

More wells are expected to be drilled in the Permian Basin during the last half of 1957, the survey shows.

One company official reports: "We don't have any way to predict our drilling program, since we operate on an 'opportunist' basis. I can say that we plan to be far more active in the last half of this year than we were in the first, since most of our money budgeted for drilling in 1957 is still left." This company drilled a dozen wells in the area in the first six months this year.

Plymouth Oil Co., which drilled 107 wells in the basin, has "about the same" program outlined for this year, with activity split about equally in both halves.

But a large drilling contractor says: "We had about 60% of our rigs in operation during the first half of the year, and right now we're ahead of that. But I'm gravely concerned about the allowable question.

"If the allowable for August is set at around 10 producing days [he says it's 'quite possible'], then we'll all begin to feel the pinch in a hurry."

A representative of The Texas Co., one of the big operators in the area, says his company plans about the same or "slightly more" wells in the last half of 1957.

Other typical comments by companies drilling in Texas:

A major company spokesman: "We certainly have no plans for slowing down. We expect drilling activity during the last half to be at least as high as the first. We have increased our foreign operations 20% to 30%, but this has not affected our domestic drilling program."

An independent: "I don't see how it can go any way but down, with the allowable being cut to 13 days. Our drilling activity depends on our income."

Another major: "Dollarwise, this year's operations will equal last year's, although there will be fewer wells because of increasing cost. Our company's offshore operations have taken some money away from other exploratory drilling."

Brad Mills, of the American Assn. of Oilwell Drilling Contractors: "Drilling has been picking up for the past month, and it looks as through the last half of the year will be better than the first."

The outlook in California, where the number of drilling rigs active dropped more than 10% in the first half, is brighter, with most majors planning greater activity in the next six months.

Standard Oil Co. of California, which drilled 178 wells in the first half, plans 195 in the second half.

Another major will drill 5% to 10% more wells during the second half.

A third major, barring a big discovery somewhere, as in Alaska, plans to continue at the same pace.

And still another major foresees a more active pace, mainly because of active development programs to build up production of low-gravity oil to take advantage of favorable market conditions.

Drilling contractors surveyed, however, feel that the second half will be largely conditioned by current events. Some take an optimistic view; others just the contrary.

In the Rockies, some companies will drill more, others less.

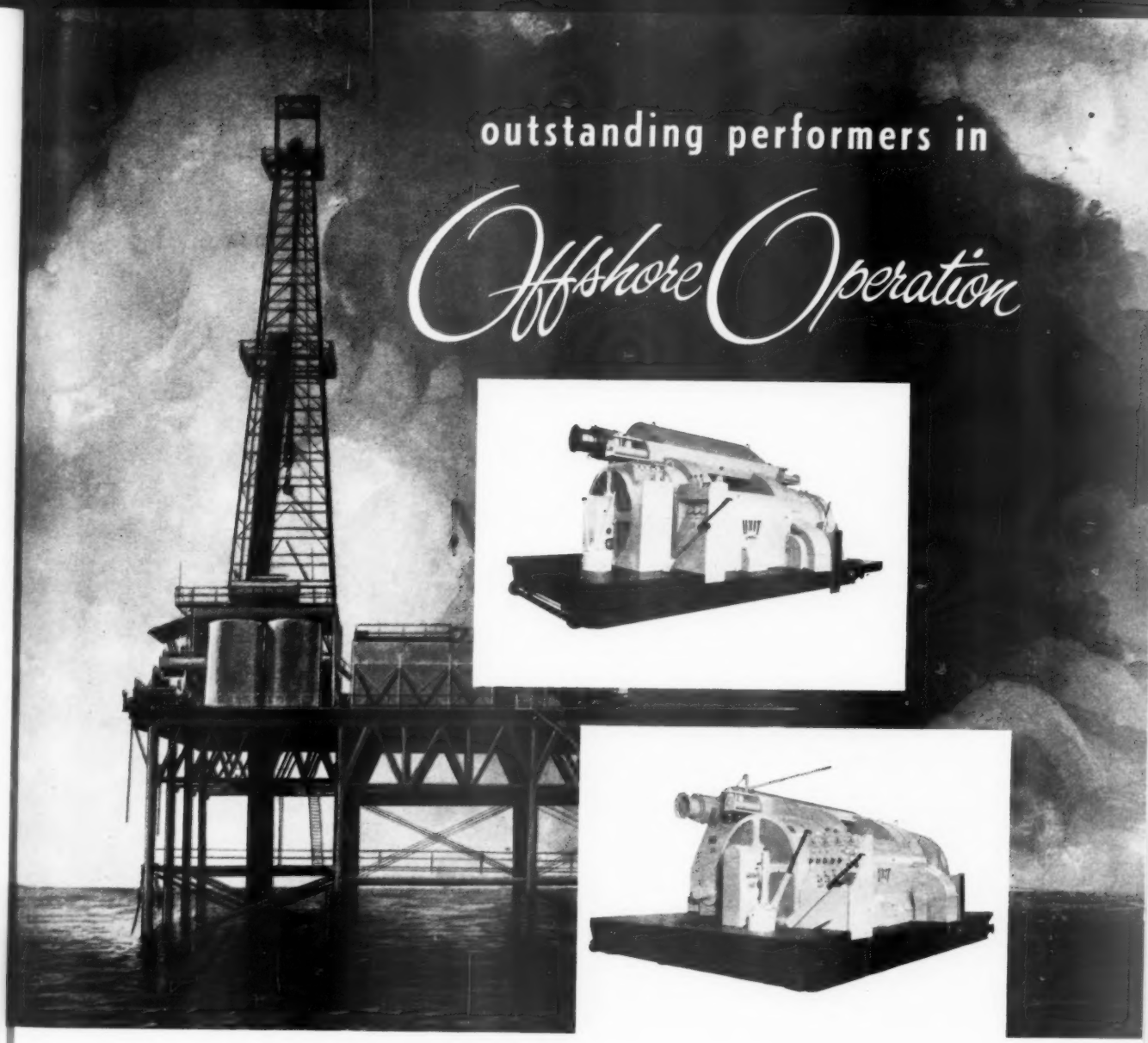
Says Joseph S. Bowman, vice-president of Colorado Oil & Gas Corp.: "We're not cutting down any, but we're not stepping up any either"—a sentiment that seems to be pretty general in this area.

But one major company spokesman says, "Last year was somewhat of a disappointment in the Rockies—the dry-hole ratio went to pot. Some of us overspent last year." He adds that drilling by his company is off about 50% from a year ago and will probably remain that way the rest of the year.

A spokesman for Shell, biggest operator and producer in Montana, says the last six months of 1957 "would be the same as the first half."

Zack Taylor, of Falcon Seaboard Drilling Co., says: "We've been getting more inquiries—from both majors and independents—in the past month. Things are beginning to pick up. There's no boom—it's just getting back to where it should be."

In South Louisiana, the consensus



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is that fewer holes will be drilled, but the footage per hole will be greater.

Two majors—Shell and The California Co.—say their drilling program for the last half will be about normal.

With deeper drilling the order of the day, the smaller contractor, with 10,000-ft.-maximum equipment, isn't in demand, so he's moving to other areas.

And field development is not as intense, because new well completions cut down the per-well allowable for a field.

Some companies report they would step up drilling of gas wells if there were more pipe lines in the area.

For all of Louisiana, a total of 969 oil wells were completed in the first five months this year, compared with 1,021 in the same period last year. Permits issued dropped from 1,986 to 1,806.

John Mecom, independent, who has about 20 rigs active in Louisiana, will drill 50% fewer wells the second half than he did in the same period last year. First half drilling was off 40% from a year ago, with the allowable factor a major reason for the decline.

In the Mid-Continent, some of the operators contacted by Petroleum Week were confident the drilling pace would pick up and continue at a higher rate the rest of the year.

One major reports it expects to wind up the entire 1957 drilling program about 16% ahead of 1956. But this will be due mostly to the firm's activity in the Four Corners.

Other majors in the area look for the same, or greater, activity in the second half.

Many drilling contractors, on the other hand, take a dimmer view of the coming months. One contractor says his business is in a slump because of money being diverted to foreign and offshore operations.

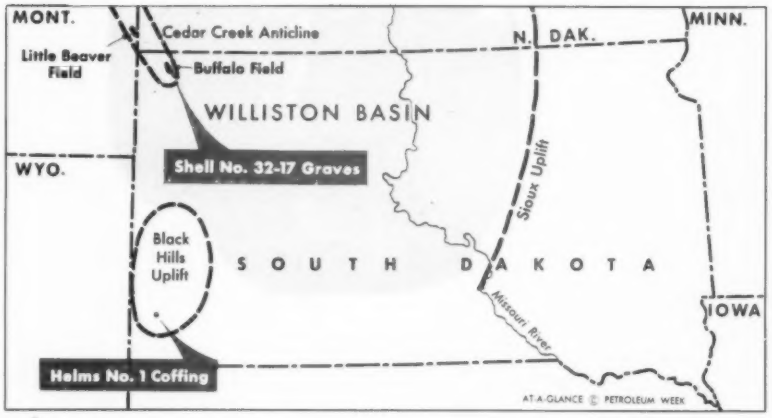
That's the picture. It's just about the same elsewhere in the country, and in Canada.

New Mexico and Mississippi are other states that apparently will rack up increases this year. And while Nebraska shows a big jump in active rigs (from 29 to 39), well completions for the half year are still below last year.

Some Canadian oil men predict that the total number of wells drilled this year will top the 3,260 drilled last year. Some put the 1957 figure as high as 3,600.

Main factors in the upswing are heavy development programs in Alberta's giant Pembina field and in Southwest Saskatchewan.

But there are those who warn that this development drilling is only a temporary respite from lessened activity ahead.



SHELL'S WELL in Harding County helps reinforce the growing belief that . . .

South Dakota Is Rarin' to Go

South Dakota, which hasn't had a producing oil well completed in more than three years, appears ready to shake off its unwanted role as the stepchild of the Williston Basin.

There's reason enough for the stepchild tag, however. A total of 122 wells were drilled in the state from 1953 through 1956: 18 in 1953; 20 in 1954; 39 in 1955; and 45 in 1956. Yet the only resulting production was the two-well Buffalo field, Harding County, in the extreme northwest corner of the state, about 30 mi. southeast of Shell Oil's Little Beaver field, Fallon County, Mont.

Both of the Buffalo field wells were completed in early 1954. As of today, they are still the only producing wells in the state. One apparently productive well was completed in late 1955, but casing was never cemented and the well never put on production.

But there are growing signs that the long drought in discoveries may be broken soon.

A Shell Oil Co. wildcat in Harding County has made relatively good recoveries on current tests. Other activity points to a new surge of interest in the state.

Shell's No. 32-17 Graves, section 17-21n-4e, recovered 15.6 bbl. of oil per hour plus 2.4 bbl. of water through perforations at 8,608-24 ft. and 8,672-700 ft. in the Red River (Ordovician).

A Shell geologist says the tests so far indicate a well better than the Buffalo field opener. The No. 32-17 Graves is 1 mi southwest of the original discovery.

Another significant test in Harding County, about 30 mi. northwest of Buffalo field and about 3 mi. southeast of Little Beaver, is being drilled by Mobil Producing Co. Its No. 21-9-F Government, section 9-22n-1e, has entered the Devonian below 8,150 ft.

Farther south, along the eastern flank of the Black Hills Uplift, Samuel Gary, Denver independent, has just spudded in the first of a 12-well farmout from Shell in Fall River, Pennington, and Custer Counties. The first test is in section 10-1n-11e, Pennington County. The Fall River sand is the principal objective.

In addition, several other tests are currently under way in Harding and Pennington Counties.

A stepup in exploratory activity also is reflected in the June 18 state land sale of 10,410 acres in Fall River, Custer, Pennington, Harding, and Jackson Counties. The tracts were leased at an average bonus of $38.92.

Development in the state so far has been closely linked to activity in the Williston Basin in Montana and North Dakota.

The first hot period of leasing followed discovery of oil on the Nesson anticline in North Dakota by Amerada Petroleum Corp.

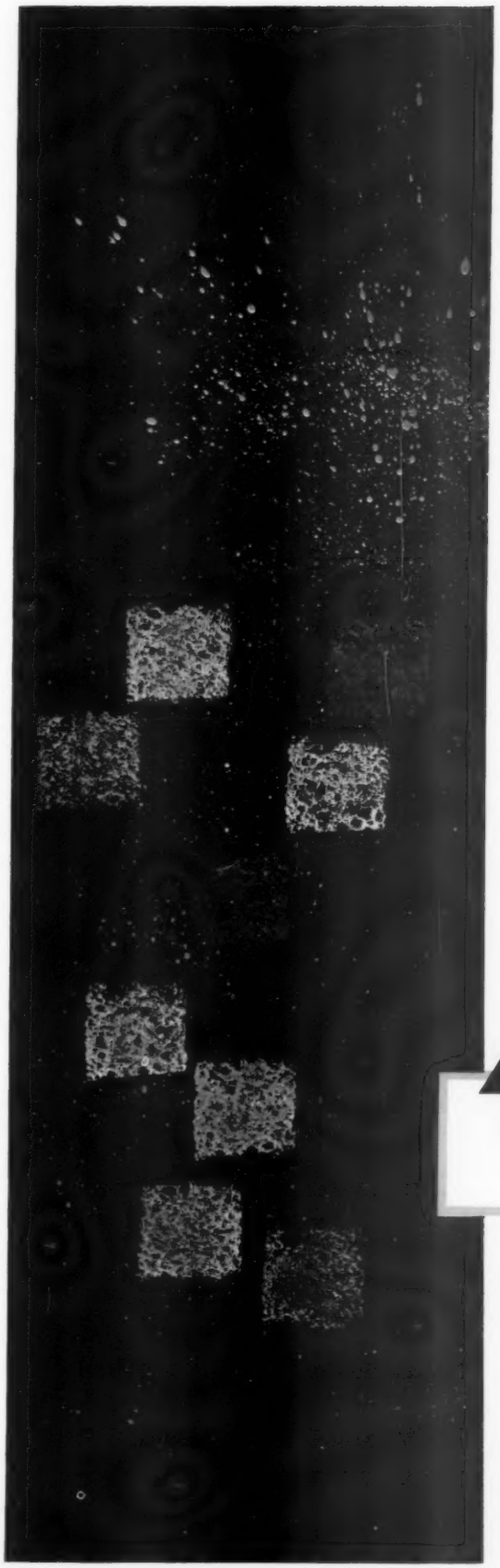
But interest has been generally slow and steady, compared with other geographic areas in the basin.

Only about a third of the approximately 200 wells drilled so far in South Dakota have penetrated the Paleozoic formations, which are the primary source of oil so far in the Williston Basin.

A geologist for a major oil company says: "It is obvious there is much room remaining to find more oil in South Dakota."

This geologist points to the low number of exploratory tests drilled in the state so far, and compares the total with the 80,000 or so drilled in Oklahoma, a state of comparable size.

An exploration manager for another



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". . . it is obvious there is much room remaining to find more oil in South Dakota . . ."

STORY starts on p. 22

major company says: "Generally speaking, all the wells drilled in South Dakota to date, except the Cretaceous tests along the rim of the Black Hills, have been tests of possible anticlinal traps.

"Most of the oil in South Dakota will eventually be found in stratigraphic traps of one type or another. To say this another way: A good deal of guts is what's needed."

A landman says: "There has been a land play developing on a small scale in northwestern South Dakota and southeastern North Dakota based on the Heath sand, which is commercially productive in Billings and Stark Counties of North Dakota. This 'Heath Trend' has added another spark of life to a steady search for oil."

As it is, a good number of major companies and scores of independents have drilled, or are drilling, in the state.

Shell has done more drilling than anyone else in South Dakota so far, having drilled or participated in more than two dozen wildcats in the past five years.

Each of the following companies have drilled three or more wildcats: Amerada, Phillips, Continental, Pure, Hunt, General Crude, and Carter. Other large companies that have drilled include Kerr McGee, Lion, Ohio, Richfield, Sun, and Mobil.

Most of the activity has centered in the northwest corner, especially in Harding County, and in the southwest corner, in the Black Hills area.

The four counties in the northwest corner have had 64 tests since 1931. An area 66 mi. north and south by 42 mi. east and west within these counties, however, is still without a single test.

The Harding County corner of the state has seen numerous shows, in addition to boasting the only oil field. The southeast end of the Cedar Creek anticline is the primary target for the northwest area. This anticline, which is productive in the Silurian, Devonian, Ordovician, and Mississippian, runs diagonally across southeastern Montana and extends into Harding County.

In the fall of 1955 there was a flurry of excitement in Custer County when the L. A. Helms No. 1 Coffing, section 34-6s-2e, reported 35 bbl. per hour on swab test of the Leo (Minnelusa-Pennsylvanian) sand at 1,390-91½ ft.

The Helms well has been listed as shut in, however, since soon after it was discovered. A nearby dry hole (Kucera No. 2 Barker) bailed some Leo oil in 1952, but was abandoned.

The Custer County activity is in the flank area encircling the Black Hills Uplift. The amount of drilling that has been done on these foothills so far is not enough to prove or disprove anything.

Slim hole exploration is possible, and has been used by several companies.

Little slim hole work, however, has been done east of the Missouri River, an area in which it could be used advantageously. The possibility of pinchouts is strong in this area, but only 12 wildcats have been drilled in what is considered by most geologists to be an area of potential production.

If a pay zone is found at a shallow depth, wildcat drilling can be expected to step up in the area east of the Missouri, which flows roughly through the middle of the state in a north-south line.

An increased drilling rate will yield more information on the hard-to-spot pinchout traps. The problem of finding these traps along the 400-mi.-long eastern rim of the Williston Basin in both Dakotas has been frustrating to those searching for these traps.

Shell's discovery well for South Dakota was completed in two zones of the Red River (Ordovician) in April, 1954.

Shell's No. 1 State, section 9-21n-4e, was completed on pump for 80 b/d of 31.6-gravity oil and 200 b/d of water. Production is through perforations at 8,587-600 ft. and 8,660-91 ft.

The discovery was spudded in in August, 1953, after six weeks of seismic work which had been augmented by surface work in the county, where buttes and mesas are common. First production for the No. 1 State was on Apr. 12, 1954.

On early tests of the producing zones, each pumped as much as 135 b/d. An offset, No. 32-16, section 16 21n-4e, was completed in the same formation for 134 b/d of oil and 79 b/d of water from 8,548-61 ft. and 8,666-77 ft.

Cumulative production through March of this year was 63,023 bbl. for the discovery and 45,289 bbl. for the offset. In March, the discovery produced 1,689 bbl. and the offset made 1,398 b/d.

The oil from the two-well Buffalo field is trucked to Billings, Mont., where it is refined by Continental Oil Co.

There are no refineries in South Dakota, though a small one was on the drawing boards, planned for Rapid City, when Buffalo field was new. There are several small refineries in Wyoming, west of South Dakota.

The geologic features of South Dakota can be described as having a northern plunge, a steep west side, and a shallow east side.

About 37,000 sq. mi. in South Dakota is underlain by a section of Paleozoic and Mesozoic rocks, some 10,500 ft. thick in the northwestern part of the state.

The section thins and wedges out on a terrace in the eastern part of the state, bordering on the Sioux Uplift, with its subsurface extending westward, and the granite high of the Pre-Cambrian Shield along the east side.

Cretaceous rocks overlap the granite platform area on the east and extend the possible oil province to include up to 70,000 sq. mi.

The greater part of the Williston Basin in South Dakota is free of the glacial debris on the surface which has hindered surface parties in North Dakota and Saskatchewan.

The seismograph, magnetometer, gravity meter, and torsion balance have been used widely. One geologist for a major company says: "The geology of South Dakota has revived the almost extinct plane-table art of the walking geologist."

He was referring to the sand beds of the Black Hills area, where 2- to 3-degree dips are maximum and the outcrops are covered.

Gas Injection O.K.'d For Texas Reservoir

An enriched gas injection pilot project in the Wardner sand reservoir in the Stratton field, Nueces County, Southwest Texas, has been approved by the Texas Railroad Commission.

The approval was given to Southern Minerals Corp. which has been conducting a pressure-maintenance program on the 1,660-acre lease in the Bertram and Wardner sands since 1946.

The approval permits the operator to inject 2.5-million cu. ft. of enriched gas a day through its No. 72 Stratton Community well in a ratio of 60% dry gas to 40% intermediates of ethane, propane, and butane.

Results of the pilot test are expected to be known at the end of six months. If they are favorable, Southern Minerals will request authority to expand the program.

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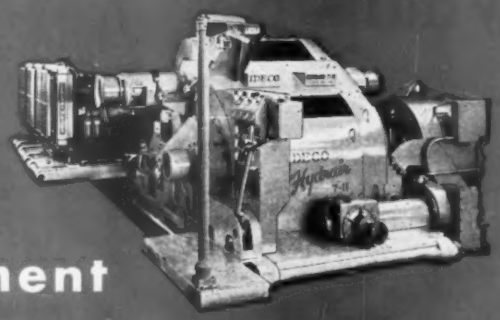

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13-M

What's New / IN EXPLORATION, DRILLING, PRODUCTION

Los Angeles Gives O.K. For Park Drilling

Signal Oil & Gas Co. and Richfield Oil Corp. have been awarded a contract for surface oil drilling at Rancho Park and golf course, Los Angeles, by the city Recreation & Park Commission. The contract is subject to approval by the City Council.

Los Angeles will get a bonus of $417,685, whether oil is found or not. If oil is discovered, the city will receive 20% of gross revenues until the cost of the wells is paid, and 50% to 80% of net revenues after that. Operating costs and cash bonus will be deducted from net production.

The commission recommended creation of the Park Oil District to prevent draining of oil from the property by nearby producing wells, and to provide additional revenues to the city.

•

Producing Properties, Inc., Dallas, has bought a "substantial" royalty interest in the SACROC unit, covering the Kelly-Snyder field, Scurry County, West Texas. The interests were purchased from E. E. Fogelson, Dallas, for $512,000.

Mac D. Oliver, vice-president of Producing Properties, says the acquisition included approximately 35 separate pieces of royalty interests.

This is the second recent royalty interest purchased by Producing Properties from Fogelson in the Scurry area.

The firm had previously bought working interest in two SACROC unit producers.

•

Scurry-Rainbow Oil, Ltd., Calgary, has farmed out 54,474 acres in the Willington area of Alberta, some 60 mi. east and northeast of Edmonton, to Tennessee Gas Transmission Co. Scurry-Rainbow is keeping 100% interest in 44,000 acres offsetting the farmout property.

Under the terms of the farmout, Tennessee Gas will earn an undivided half-interest in the acreage after conducting a seismic program and drilling a test to the Pre-Cambrian, at an estimated depth of 6,800 ft.

•

The Texas Railroad Commission reports that marketed production of natural gas in the state exceeded 400-billion cu. ft. in April, 3% more than in April of last year.

Total output was 503-billion cu. ft., including gas returned to reservoirs, flared, or otherwise lost.

Marketed production included 350-billion cu. ft. sold to pipe lines, 12-billion cu. ft. for carbon black, and nearly 38-billion cu. ft. used for lease or plant fuel.

•

Two lease sales of Louisiana acreage netted $554,805 for the Louisiana Mineral Board and the Bureau of Land Management.

The board accepted $544,456 for leases on 3,928 acres. Sun Oil Co. was

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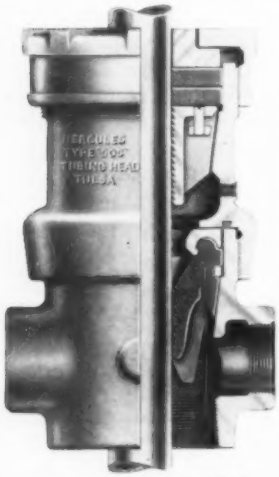

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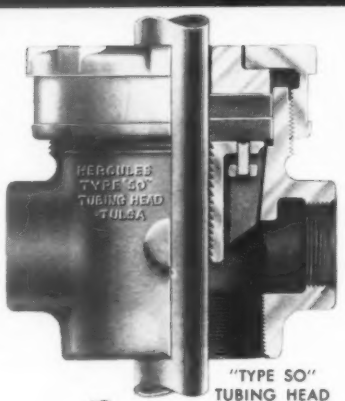

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top bidder, offering $201,111 for a 657-acre tract in Terrebonne and Lafourche Parishes.

The bureau received $10,349 for leases on 647 acres in four fields. Land was leased in Caddo-Pine Island field, Rodessa field, Naborten field, and Greenwood-Waskom field.

•

The Colorado Oil & Gas Conservation Commission will hold a hearing Sept. 17 to receive a report of the operators' committee on progress being made toward unitization of Little Beaver field, Washington and Adams Counties.

Operators have been conducting unitization negotiations for several weeks. The hearing was set by the commission after its denial of a request for modification of field rules now in effect.

The Little Beaver field is south of the Adena field, which is the only substantial field in the Colorado portion of the Denver-Julesburg Basin that is now operating under a unit plan.

•

Nearly 302,000 acres will be offered for lease at an Alberta government sale to be held July 25 in Edmonton. Acreage to be offered, in 36 parcels, is scattered throughout the province, including central and northern regions.

•

Two new units have been approved, one in Utah, and the other in Wyoming.

Pan-American Petroleum Corp. will operate the newly-approved Montezuma Creek Unit, San Juan County, Utah. The unit covers 32,650 acres in the Paradox Basin.

In southwestern Wyoming, Belco Petroleum Corp. has received approval of the Chimney Butte unit, which applies to formations below the Cretaceous Hilliard shale in the Big Piney field, Sublette County. The unit includes 30,990 acres. Belco has reached a depth of 8,416 ft. on its first test in the unit, which is unofficially reported as a Frontier gas discovery.

•

Oil and gas law, and taxation problems of interest to the Rocky Mountain region, will be discussed at the third annual Rocky Mountain Mineral Law Institute, to be held at the University of Montana, Missoula, Aug. 1-3.

The annual institute is a project of the Rocky Mountain Mineral Law

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The "Oil Directory of Texas for 1957" has been published by R. W. Byram & Co., Austin, Tex.

The directory lists companies and individuals who are actively engaged in producing, purchasing, or processing oil or gas in the state. The edition marks the eleventh consecutive year of publication of the directory.

•

What is said to be a new time record for relocation of a mobile platform in the Gulf of Mexico has been set by the "Scorpion," owned by Zapata Off-Shore Co.

In 8½ hours, the three-legged, electrically-driven unit was lowered to the water, and towed about one mile to a new location, then raised again to a height of 25 ft. above the water level.

Water depth at both the old and new locations was reported to be approximately 62 ft.

Relocation activity took place in a silt-bottomed area 10 mi. out from the South Pass of the Mississippi River, approximately 30 mi. east of Venice, La.

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Drilling Highlights

California—Sunray Mid-Continent Oil Co. No. 54-34-e, section 34-20s-16e, Fresno county, was completed for a reported 1,050 b/d of 30 gravity oil from Eocene sand at 10,360 ft. The well is the second producer in the Guijarral Hills field, hottest discovery area in California, where seven extension tests are under way.

Kansas—Panhandle Eastern Pipe Line Co. No. 1-19 Tucker, section 19-34s-41w, Morton County, was completed as a multiple-pay oil and gas well, for 360 b/d of oil in the Cherokee sand at 4,400 ft., 168 b/d in the Morrow sand at 4,675 ft., and 650,000 cu. ft. of gas on drillstem test at 3,055-210 ft. The discovery is about 1 mi. from the Greenwood gas field.

Colorado—Kimbark Co. No. 1 Neeham, section 10-s-55w, Washington County, recovered 2,375 ft. of gassy oil and 100 ft. of muddy water on one-hour test of what is believed to be the J sand, at 4,929-37 ft. The test is 3 mi. northeast of Plum Bush Creek field.

Wyoming—Carter Oil Co. No. 1 Line Ditch Unit, section 25-58n-103w, northern Park County, flowed gas at the rate of 2-million cu. ft. daily on test of the Greybull (Cretaceous) sand, at 9,272-311 ft. The project is the first test of the 12,000-acre unit, and is scheduled to drill to the Tensleep at about 11,000 ft.

East Central Texas—B. B. Orr No. 1 George Abraham, Dennis Hagerty Survey, Robertson County, flowed 5.3-million cu. ft. of gas daily from perforations at 4,726-31 ft. The test is the farthest west-southwest Edwards lime pay for the district, and the first discovery for the county since the East Calvert Upper Glen Rose pay area was opened in 1953 in western Robertson County.

The discovery is 5 mi. southeast of Bremond, in the north central part of the country.

North Dakota — Northwest Oil Drilling Co. No. 1 Bunting, section 5-162n-91w, Burke County, recovered 450 ft. of oil in one-hour test of the Madison formation at 6,100-48 ft. Test also recovered 500 ft. of oil- and gas-cut mud emulsion. The wildcat, now drilling below 6,315 ft., is 12 mi. northwest of the one-well Coteau field, the first production found in Burke County.

Southwest Texas — Hargrave Oil Corp. and W. E. Colson No. 1 Kathryn Jackson, Hidalgo County gas-distillate discovery 5 mi. north of Monte Cristo, flowed 8.5-million cu. ft. of gas daily, plus 7¼ bbl. of 50.3-gravity distillate per million, through 12/64-in. choke from perforations at 8,758-809 ft. The discovery is on a 500-acre lease in Block 84 of Valley Farms Subdivision.

This announcement is neither an offer to sell nor a solicitation of an offer to buy these securities. The offer is made only by the Prospectus.

Kerr-McGee Oil Industries, Inc.

$20,000,000

5¼% Sinking Fund Debentures, due June 1, 1977

With Common Stock Purchase Warrants Attached

Warrants entitle holders to purchase 5 shares of the Company's common stock for each $1,000 debenture at $80 per share from April 1, 1958 to June 30, 1964.

Price 100% and Accrued Interest

220,000 Shares
Common Stock

Price $70.75 per Share

Copies of the Prospectus may be obtained in any State only from such of the several Underwriters, including the undersigned, as may lawfully offer these securities in such State.

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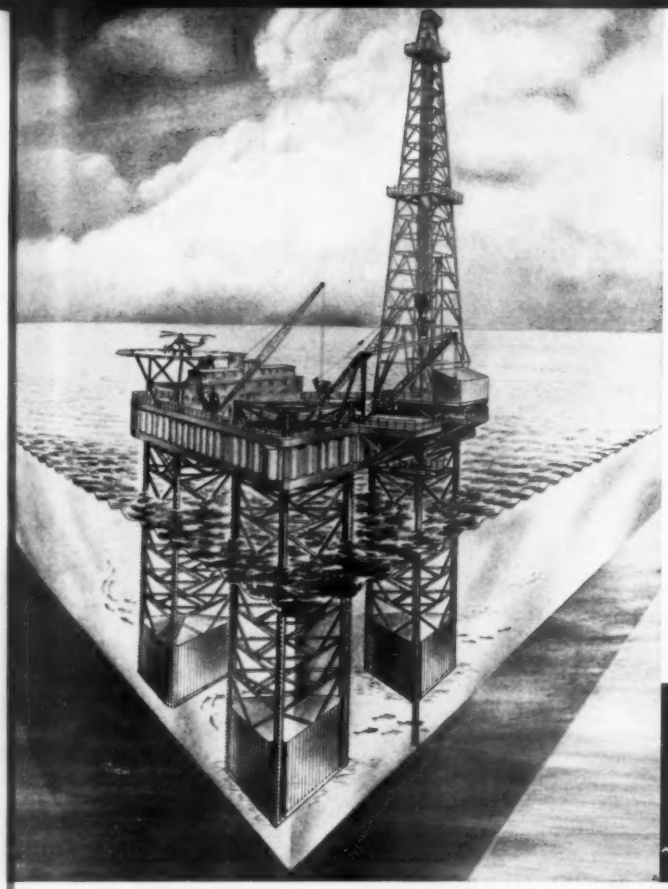
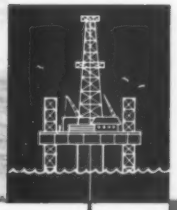
June 25, 1957.

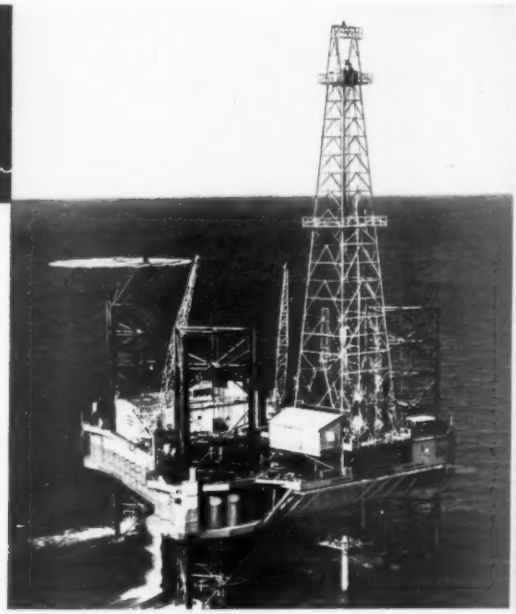
Mobility...
Versatility...
Speed...

LeTOURNEAU mobile platforms now do the complete job from spudding in to setting production platform



Engineering illustration of LeTourneau Mobile Offshore Platform, showing stiffleg crane used in setting production platform.





Latest LeTourneau-built Mobile Platform to go into operation, Zapata Offshore Co.'s Vinegarroon. Platforms of this class may be equipped to drill to 25,000 ft. in water up to 110 ft. in depth.

LeTourneau Mobile Offshore Platforms now are complete, self-contained units that function as construction or service rigs as well as highly-mobile drilling platforms. When service or derrick barges are not available, the production platform can be set from the drilling platform with a minimum of delay.

This added feature—latest of many—demonstrates the versatility of LeTourneau platforms.

The unique, tripod design, with its electro-mechanical raising and lowering mechanism, permits fast, time-saving location changes. With spuds retracted, the unit becomes a seaworthy barge that is towed to location and self-elevated to the desired height above water. The three spuds are lowered and raised—at the rate of 1 ft. per minute—by electric gearmotors driven by a powerful diesel-electric generating plant.

Independently-operated open-truss spuds enable the platform to withstand severe wave and weather conditions. The platform level may be adjusted by the flick of a switch in the event of scouring or some other unexpected action.

LeTourneau-built anchor winches, which facilitate platform positioning, and revolving deck cranes, servicing the deck and hold areas, are electrically powered. Other features include: movable derrick for multi-well drilling; comfortable, completely air-conditioned crew quarters and living facilities; helicopter landing area with safety net; radio and intercom network connecting strategic points with the office.

Each platform is fabricated with matched and proven components manufactured by R. G. LeTourneau, Inc., which handles every step of production from pouring the steel to final rigging.

Our engineers are available without obligation to discuss your requirements. Inquiries confidential. Write or call us today.

R. G. LeTourneau, Inc. furnishes Mobile Offshore Platforms for delivery anywhere in the world, completely rigged and ready for drilling. 5 to 8 months delivery, depending upon design.

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MARINE PRODUCTS DIV.
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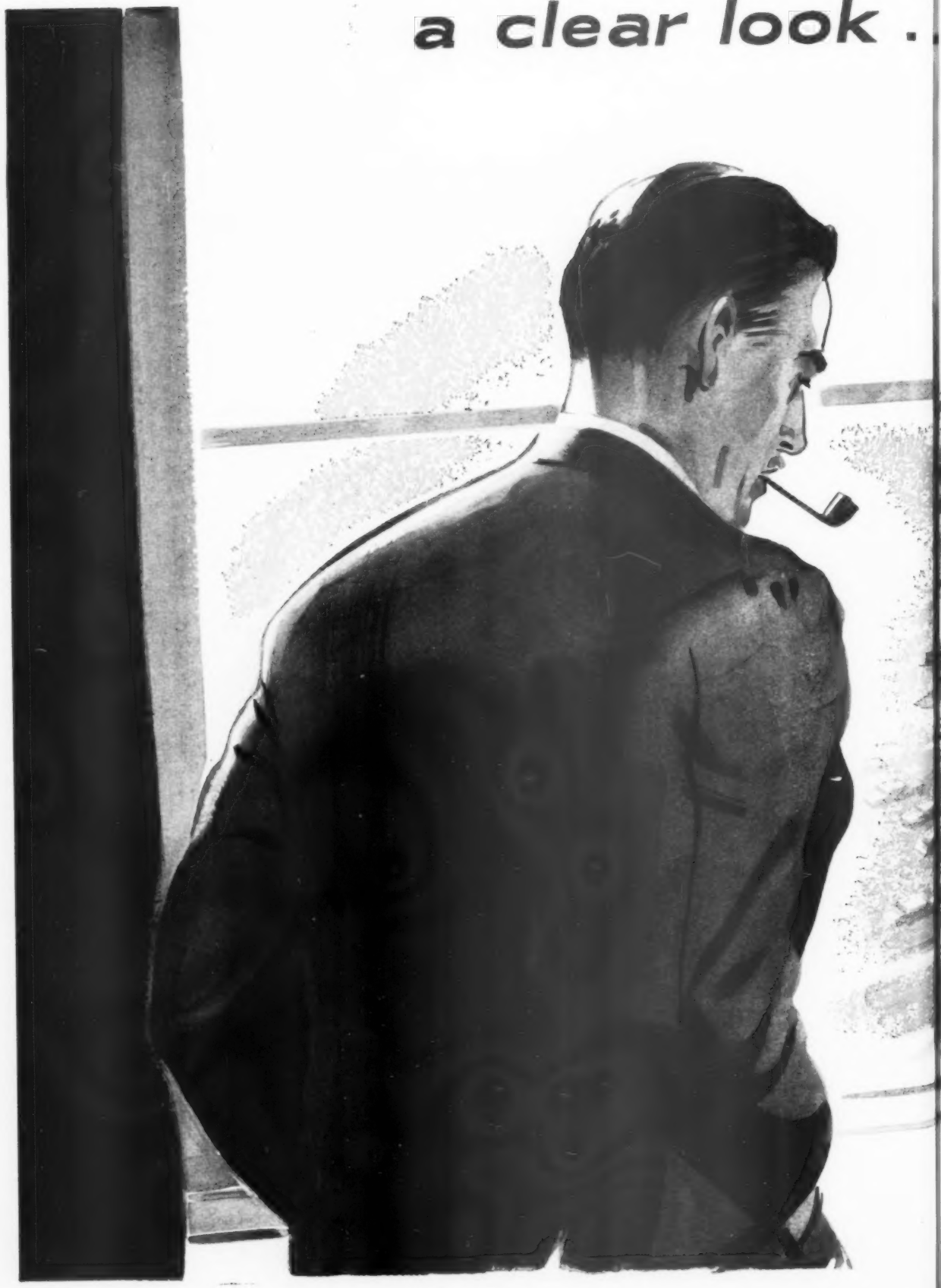
M-107

a clear look . . .



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Petroleum Products Marketing

For nearly a half century UOP has been developing and engineering processes for more efficient and more economic production of petroleum products and by-products. Always of primary concern, too, has been the profitable manufacture and marketing of these products by the individual refiner.

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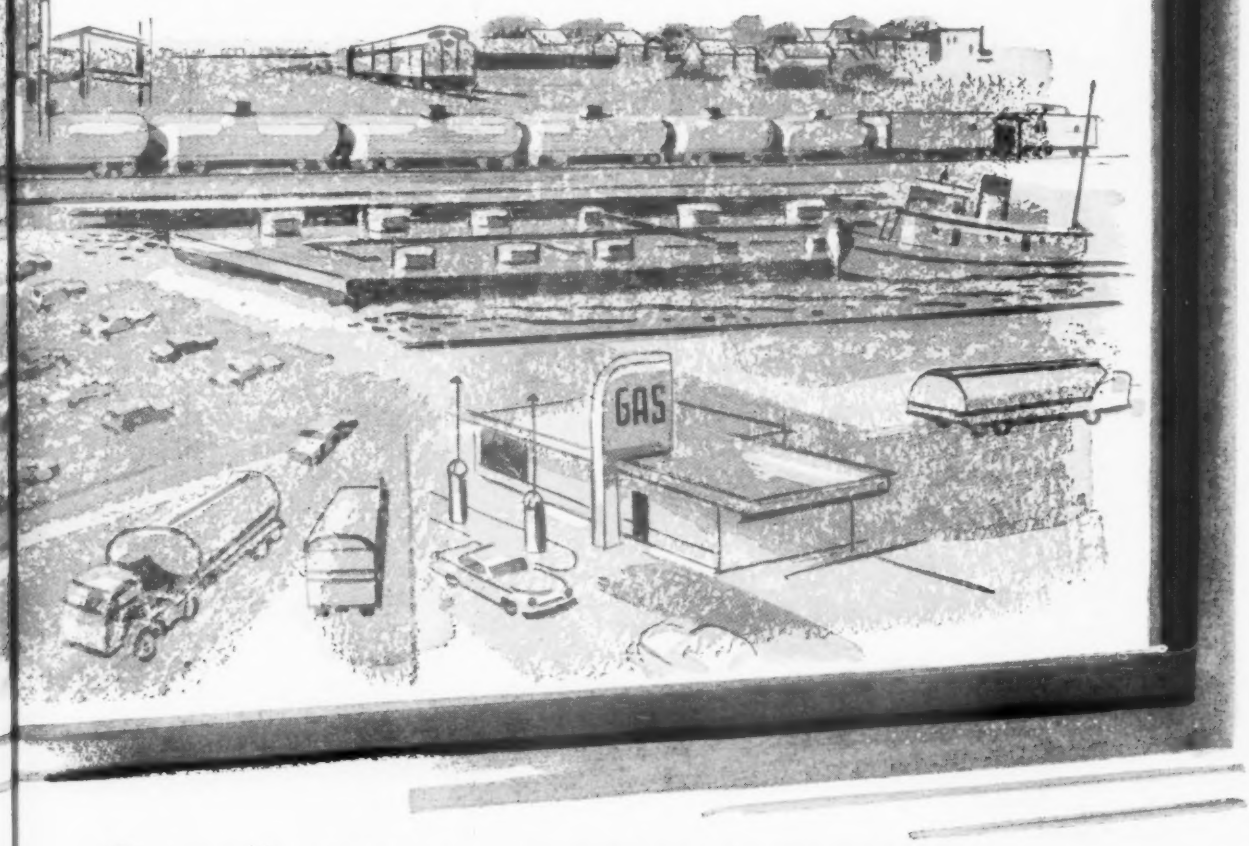

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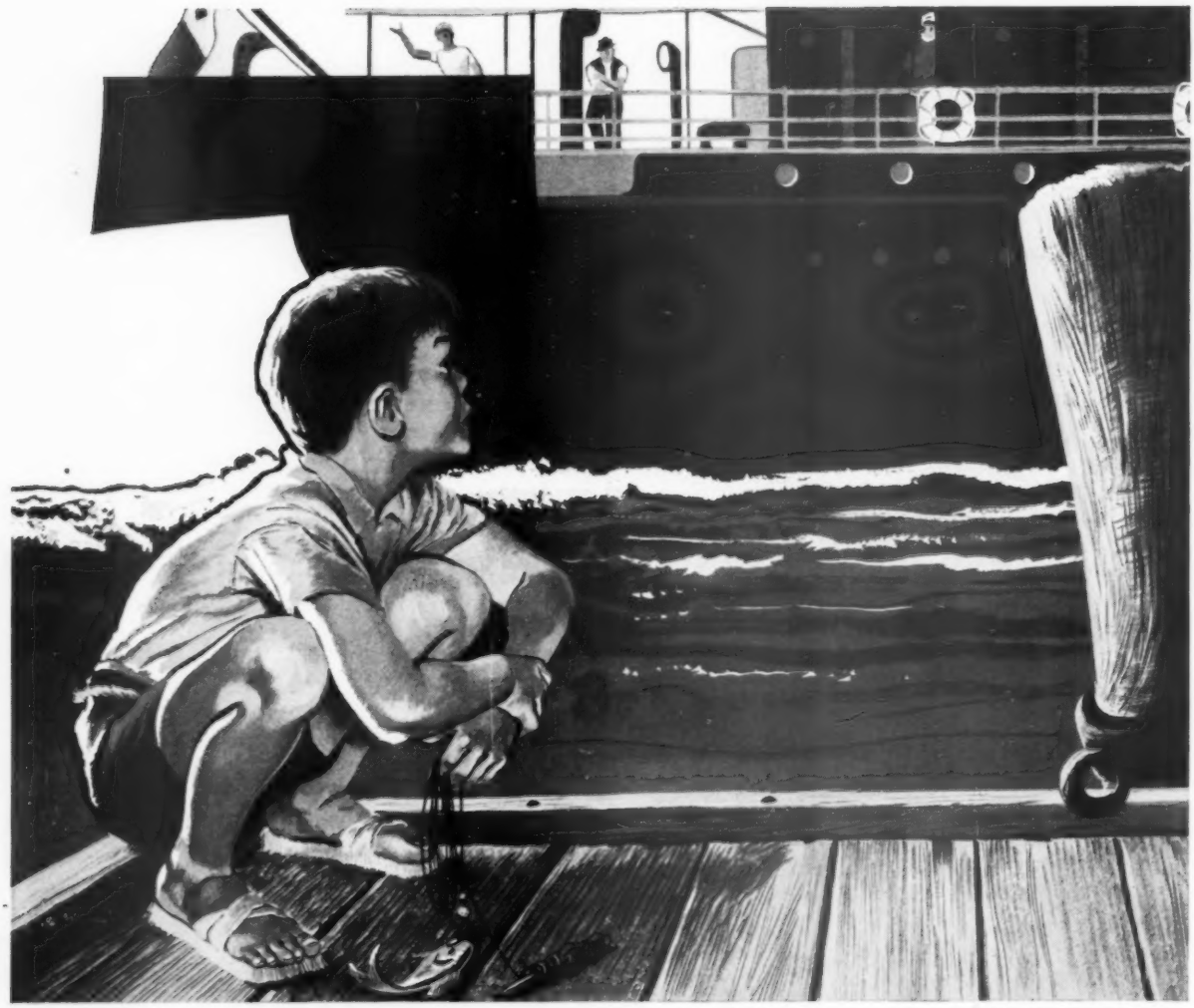

a cargo of hope for him

This is a special kind of ship, and it meets a special kind of need. It is the need you see everywhere these days throughout Asia, Africa and the lands of the Pacific – the demand for power machines to do work better and faster.

Throughout this vast area Standard-Vacuum tankers are plowing the seas as you read this, deep-laden with the petroleum required for new industry. Stanvac finds the oil, transports it, refines it and gets it to those who want it – all within the area where Stanvac operates.

These peoples are resolved to build a new kind of life for themselves and their children. Today they dream of food and clothing and shelter enough for everybody. And Stanvac is doing its best to help them make that dream come true.

White Plains, New York

POWERS PROGRESS

Newcomer Strikes Oil in Maracaibo

CARACAS—Superior Oil Co. of Venezuela has made what appears to be one of Lake Maracaibo's best discoveries with its first two wildcats. The tests were drilled on its 7,773-acre Group 75 lease, in the lake's national reserve. Loffland Bros. is the drilling contractor.

No. 1 Lama, located in the northeast corner of the concession, found 313 ft. of oil sands in the C4X and C5X Eocene series.

No. 5 Lama, located about 2½ mi. south of No. 1 Lama, near the center of the concession, is running casing after finding 349 ft. of oil sands in sections between 7,434 and 7,929 ft.

In No. 1 Lama, 9⅝-in. casing was landed at 7,982 ft. The well will be carried to the Guasare formation to test an additional estimated 2,000 ft. of Eocene section before dually completing a 65-ft. section in C4X sand from 7,425-90 ft. and a 105-ft. section in C5X from 7,652-757 ft. The remaining oil sands will be unproduced at present.

Crude is 30-gravity, and sand porosity is 34%.

Superior is the first new operator to find production on recent Venezuelan concessions. The company paid a record $2,833 an acre, totaling $22-million, for the mid-lake lease last year.

No. 1 Lama was spudded in on June 6, in 98 ft. of water.

Meanwhile, Signal Exploration Co., operator for a four-company group, has suspended operations on its first wildcat at 9,470 ft. on Block 4 in the lake. Reason: Principal sands were thin and near the water table. The rig has been moved to a location 4 mi. southwest.

The wildcat, No. 1-X Centro Lago, will be temporarily capped until additional geological work is done to determine the advisability of further testing in the Cretaceous formation—already producing in some wells in the lake.

Signal is operator for Pure Oil Co., Standard Oil Co. (Ohio), Hancock Oil Co., and Signal Oil & Gas Co. Drilling contractor is Loffland Bros.

Superior has six platforms built, and plans to add more rigs to drill up its concession.

Superior has acquired a fleet of tugs and the biggest crane barge on the lake. Two more are under construction.

Superior expects to have oil shipments under way in October. A $4-million terminal, with a 1,000-ft. pier, is being built for Superior by Brown & Root and Raymond Concrete Pile Co. It is located near San Francisco, on the western lakeshore. Completion is scheduled for August.

Contracts will be let for a 22-mi. underwater pipeline running from the lease.

In other Venezuela activity, Sinclair Oil & Refining Co. sold its entire drilling operation to Helmerich & Payne of Tulsa. It is the first foreign operation for the Tulsa firm.

Is Egypt's Suez Line a Pipe Dream?

CAIRO—Egypt is pulling a red herring over the trail of the Persian Gulf-Iraq-Turkey pipeline proposal with its own proposed construction of a pipeline parallel to the Suez Canal, according to some Mideast observers.

Under the renewed Egyptian proposals, giant supertankers that cannot now transit the canal would be able to offload Persian Gulf crude at Suez, where a 103-mi. pipeline would carry it to the Mediterranean for reloading (PW—Jul.5'57,p9).

Talks were continuing in Cairo last week between Egyptian authorities and Aristotle Onassis on the projected formation of a government-controlled Egyptian joint stock company that would build and operate the line.

The project could cease being an Egyptian pipe dream if foreign financing is forthcoming—either directly from Onassis, or if he convinces international financiers to participate in the scheme.

This is the third time since the Suez Canal seizure last July that the Egyptians have mentioned the pipeline project. The proposals they last put forth were turned down by Onassis in December.

According to the current proposals being discussed in Cairo, Aristotle Onassis would be the third principal shareholder in the pipeline company. The other two would be the nationalized Suez Canal Authority and the government's own Economic Organization.

The latter was set up early this year to represent the Egyptian government in all major industries and business concerns in Egypt. It took over all shares formerly held by British and French nationals and firms, thereby acquiring the Shell-affiliated Anglo-Egyptian Oilfields Ltd., as well as a participation in tobacco factories and textile mills.

Its participation in the proposed pipeline company would assure full government control of management and operations.

The Egyptians hope the venture will lure not only Onassis, but international oil producers and marketers as well. At the moment, the first possibility seems almost as unlikely as the second.

It is supposed that Onassis would not be interested in putting money into a project he would not control, and from which he would get little profit.

Hassan Ibrahim, Chairman of the Economic Organization, says Egypt would welcome the participation of oil companies—on condition "that foreign capital in the project is subject to Egyptian law and does not menace Egyptian rights and sovereignty."

But it is exceedingly doubtful that oil companies, for their part, would invest in a pipeline controlled by the Egyptian government.

Under the Egyptian terms, Onassis —possibly with other foreign interests —would contribute 40% of the $37-million capital for the pipeline company, with the other 60% coming from the government's Economic Organization and Suez Canal Authority.

Egypt would get 50% royalties on the net profits, with the remainder to be divided between Egyptian and foreign shareholders.

The pipeline would be operated on the basis of toll charges.

The pipeline company would be 100% nationalized following expiration of a 12-year concession that would start from the date of operations. The original Suez Canal Co.'s

concession had a 12-year period still to run when Egypt nationalized it last year.

If agreement is reached on the proposals, pipeline construction would start this year, according to Ibrahim. The project would take a year to complete.

The government's Middle East News Agency says one 36-in. line with 500,000 b/d capacity would be built initially. Later a twin pipeline would be added.

The line would run east of the canal, from Suez to a Mediterranean terminal at Port Fued, across the canal from Port Said. Facilities for the biggest supertankers at both ends would permit offloading of Persian Gulf crude at Suez, and reloading of the oil for Europe at Port Fued.

Due to marshlands and lack of highways east of the canal, it is possible that the pipeline would be built to the west instead.

Iran Now May Offer Independent Rights

IRAN—Foreign oil companies may bid for "independent" oil development rights in Iran by offering bonuses, under new provisions added to Iran's proposed oil bill on June 19. Previously, the bill provided only for partnerships with the government-owned National Iranian Oil Co. (PW—Jul.5'57,p36).

The maximum acreage that a company would be entitled to develop independently would be 2,509 sq mi. in each 28,950-sq. mi. district of Iran.

This is exactly the same area permissible for joint development agreements in which NIOC would hold less than 50% participation.

Partnerships in which NIOC holds 50% or above would be permitted a higher maximum—3,088 sq. mi. in each district.

All contracts, whether independent or joint, would be negotiated through NIOC.

Either type of agreement provides for the usual 50-50 profit split with the government itself.

The June 19 version of the bill is still being amended, article by article, by an oil committee in the lower house of Iran's Parliament. It will have to be passed by both houses to become effective before the present session adjourns this month for the summer.

Elmer Batzell, the Washington (D. C.) oil consultant, assisted Iran in drafting the new oil legislation.

Deadline Nears for U.S. Group

BEIRUT—Lebanon—the only Arab country in which no oil exploration is now taking place—is awaiting a decision next week from U.S. independents who hold an option to explore a local company's holdings.

The Lebanese have been getting impatient over the delays and uncertainties involved in the deal, under which the U.S. group may take up an interest in Cie. Libanaise des Petroles (PW—May24'57,p42).

Cie. Libanaise des Petroles will lose its concession in the Bekaa Valley unless the pending deal with the U.S. independents is concluded immediately, so that drilling can be started before Aug. 10.

CLP's concession agreement, ratified in August, 1955, requires the company to start drilling by Aug. 10, 1957, and to drill 27,000 ft. within a year.

CLP had announced in May that an unnamed American group—including independents from Colorado, New Mexico, and Texas—had taken up an option to participate in the capital and operations of CLP.

A preliminary agreement was reached then to extend the option to permit the U.S. group to examine CLP's records, its concession agreement with the government, and the concession area itself.

The new option expires on July 15. It was originally picked up for the U.S. group by Oliver W. Henderson and Howard J. Kane, an oil broker. Other representatives include Oliver Daniel and Harry Trueblood.

The U.S. interests are now due to give CLP written notification accepting or rejecting its offer, or setting forth conditions to be met by the Lebanese company.

Michel Doumit, president of CLP, told Petroleum Week that the Lebanese authorities are, "in principle," in favor of granting CLP a delay to meet concession terms.

This does not mean that the government has actually renewed the concession, as CLP had wished at first. Neither has it actually agreed to extend the deadline for beginning exploratory drilling.

Further, there is some question whether the government's "agreement in principle" would hold much water, inasmuch as the present administration is due to resign in early August with election of the new Chamber of Deputies.

CLP was formed after World War II with French management. In association with Pacific Western Oil Co. (now Getty Oil), CLP secured an exploration license and drilled a well at Sohmor (also called Yohmor) in 1952-53. After drilling below 8,000 ft., Pacific Western halted operations and left Lebanon. The Saudi Arabia-Kuwait Neutral Zone looked more promising.

Henderson's group initially made the same agreement with CLP as that reached with Aristotle Onassis a year ago.

Under this, CLP's shares would be increased from 20,0000 to 65,000, with par value of 100 Lebanese pounds ($31) each.

Originally, Onassis was to acquire the extra 45,000 shares and assume control of CLP's operations. After the Suez crisis, Onassis lost interest in CLP and quietly dropped out of the picture.

The Henderson agreement is similar. The U.S. group would contribute $1.4-million for exploration, with $350,000 payable immediately and the rest as drilling proceeds.

The U.S. group may now seek a somewhat different formula, under which its exploration costs in Lebanon would be tax-deductible in the U.S.

CLP president Doumit explains that, if the Onassis terms were followed, the U.S. interests would simply become major stockholders in CLP. Their participation in its exploration expenditures would not therefore be tax-exempt in the U.S. "That's why we may have to negotiate on a different formula," Doumit adds.

Any eventual agreement between CLP and the U.S. group will have to be ratified by the government.

According to CLP's concession agreement, the company cannot sell out its concession interests to a third party. Local business circles point out that the authorities may not ratify the agreement if they consider that acquisition of a controlling interest in CLP amounts to a sell-out to the U.S. group.

The U.S. group, meanwhile, has Geophysical Service Inc. doing some preliminary surveys in the Bekaa Valley for an estimate of exploration costs.

Henderson, who was in Beirut recently for a closer look at CLP, told PETROLEUM WEEK that exploration in the valley would require an estimated $7-million to $8-million, including about $500,000 for seismic work.

If his group finally comes to an agreement with CLP, Henderson says, it would probably hire a drilling contractor.

What's New / AROUND THE WORLD

PARIS—Oil company stock, which the French government holds through the Bureau de Recherches de Petrole, will be put on the market in the form of nonvoting negotiable certificates.

Reason: to increase the availability of oil shares and to bring down highly inflated market prices.

Government oil holdings now represent some $200-million at nominal values, and over ten times that sum at present market values. No decision has yet been made as to timing or scale of operation.

Voting power will be retained by the Bureau de Recherches de Petrole. The Bureau's main holdings include: 53% of Societe Nationale des Petroles d'Aquitaine; 57% of Cie. d'Exploration Petroliere; 55% of Societe de Prospection et Exploitations Petroleires en Alsace; 66% of Societe Francaise de Recherches et d'Exploitations du Petrole; 42% of Societe Cherifienne des Petroles; and 49% of Societe Nationale de Recherches et d'Exploitation des Petroles en Algerie.

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CUBA—Siboney-Caribbean Petroleum Co. spudded in its first wildcat last week in Camaguey Province, on Cuba's south coast. It followed three years of preliminary exploration.

The No. 1 Gertudis, first deep test ever drilled in the area, will be carried to 10,000 ft. to test the Middle Cretaceous zone. Drilling contractor is Simpson Drilling Co. of Cuba.

The test is located on a 1,382,000-acre block, held by Siboney-Carribbean. Hudson Oil & Gas Co., of Shreveport, is associated with Siboney-Carribbean in this venture. Cuban Stanolind Oil Co., which holds extensive acreage in the area, is contributing to the cost of drilling the test.

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PERU—Cia. Peruana de Petroleo "El Oriente" has temporarily suspended drilling at 2,460 ft. on a step-out to its recent oil discovery east of the Andes, pending arrival of spare parts.

The new test is located about 4 mi. east of Contamana on the Ucayali River, some 1,640 ft. below No. 1 Maquia, the discovery well. The latter was brought in on Mar. 10 and tested about 500 b/d at 2,000 ft. (PW—Mar.22'57,p74).

No. 1 Maquia is the first well brought in by "El Oriente" following 12 years of exploration and five dry holes. The company's present plans call for bringing in a total of five wells before actual production is started in the area.

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BOLIVIA—Crude oil production in southeast Bolivia was increased 12.8% during the first four months of the year by Yacimientos Petroliferos Fiscales Bolivianos.

The output of 1,162,674 bbl. for January to April, 1957, compares with 1,030,749 bbl. for the same period of 1956.

YPFB has announced that it will again export gasoline to Peru, at the rate of 10,693 bbl. a month.

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ALGERIA—At least five American oil companies have advised the French government that they are interested in obtaining Sahara concessions. Their requests will be measured against a strict new French policy line, according to France's Journal des Carburants.

A total of 27.1-million acres in the Sahara is due to be surrendered in October by S. N. Repal and by Cie. Francaise Des Petroles d'Algerie.

A special session of the administrative counsel of the French government's oil authority has laid down a series of basic principles for considering Sahara concession bids from foreign groups. Among them:

- No foreign group can receive a concession in which it would be a majority shareholder.
- Concessions will be granted only to those companies originating in a country whose policy guarantees strict noninterference in France's relations with its overseas territories.
- No foreign groups can get Sahara permits whose nations do not allow France to participate in their own concessions. (Notably Venezuela and Mexico.)

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CUBA—The newly formed Copetrol Oil Refining Co. S.A. expects to have its 15,000 b/d export refinery in operation within a year on Cuba's east coast.

The refinery will be built in Nuevitas, Camaguey province. Its initial capacity will eventually be increased to 33,000 b/d.

Final plans have not as yet been completed. No arrangements have been concluded for crude purchases or products sales. Grebe & Doremus Process Co., Houston, is expected to design and build the plant.

Copetrol has an authorized capital of $20-million. Financing is understood to be principally American.

According to Cuba Petroleum News Digest, Copetrol is an outgrowth of a company formed earlier by two Florida businessmen to build a 5,000 b/d plant in Las Villas Province (PW—Jan.20'56,p32).

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EGYPT—The new Abu Rodeis discovery well on the west coast of Sinai is expected to produce about 2,000 b/d, according to Minister of Industry Dr. Aziz Sedki (PW—Jun.21'57, p58). A second test will be spudded in there almost immediately by Eastern Petroleum Co.

Following a visit to the Sinai oil fields, the minister claimed EPC's production would increase shortly to 20,000 b/d. This increase in Sinai production, he said, would soon meet Egypt's oil needs, saving an annual expenditure of $60-million in hard currency for oil imports.

EPC is a joint venture of the Egyptian government with International Egyptian Oil Co., whose growing Belayim and Feiran production averaged about 6,000 b/d last year.

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GUATEMALA—Bandini Petroleum Corp., Los Angeles, reports it still holds interests in two concessions in Izabal (PW—Jun.28'57,p44).

John P. Hurndall, president of the company, says the California Standard affiliate in Guatemala originally negotiated for Bandini's interests in two concessions in the Puerto Barrios area. But, he says, these negotiations have been terminated by mutual agreement, and Bandini consequently holds a 19.2% interest in a 67,133-acre block, and 32% interest in a 211,808-acre block.

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SYRIA—Deutsche Erdoel's Syrian subsidiary will be ready to drill its first wildcat in August or September, the company announced in Hamburg.

Soc. des Petroles Concordia holds a 3,458-acre exploration permit in northeast Syria, which was granted to the German independent last summer. The first wildcat will be located in the Ghouna region of Jezira province, near the Iraq border (PW—May24'57,p43).

DEPT/Management

Technical Men Shown 'Path to the Top'

In its broad effort to avoid "professional discontent," Esso Research is using this new **equal-advancement ladder**. . .

There's no blind alley for the oil scientist or engineer who wants a bright career in purely technical work. That's the promise made by Esso Research & Engineering Co. in adding a new technical advancement system to its broad program for encouraging professional people.

The problem of "professional discontent" is potentially large for a company with some 1,300 engineers and scientists (plus many in research affiliates).

Esso Research is well aware that, in today's rush of new oil technology, the individual may feel left behind. It realizes there is a potential lowering of morale and effectiveness in the feeling of some industry engineers and scientists that they are unrecognized, underpaid, and given little chance to shine.

Over the years, the company has built high morale with a policy that fundamentally calls for close attention to each man's needs and desires. However . . .

Until now, Esso Research has had trouble dispelling the belief that real recognition and success lie only in administrative work. This conviction has persisted despite the fact that for years the company has paid equal salaries for "comparable" work along either administrative or technical lines.

Explains Frank Persons, the company's deputy coordinator for general administration, "It is true that the company rewards the man with skill in supervision and management ability. In addition to keeping in touch with technical work, he is responsible for planning budgets and programs, selling ideas to top management, and handling personal problems. This 'ulcer factor' must be recognized. On the other hand, technical achievement is of primary importance to the company."

A big reason for the administrative lure: The titles of promotion were in plain view. "The men could see the path to advancement," says Persons. "But in technical work, the titles were missing. In a vague way, the professional men knew that if they did well in technical work, they would rise in time to positions of prestige. You might say they could see the mountain—but no path up the mountain."

NEW RUNGS

Administrative	Technical
Director	Scientific Advisor (or equivalent)
Assistant Director	Senior Research or Engineering Associate
Section Head	Research or Engineering Associate
Group Head or Project Engineer or Project Chemist, etc.	
Engineer or Chemist or Physicist, etc.	

To encourage progress in purely technical work, the company has created two new levels of technical recognition. It now has a technical ladder "matching" that for administration (chart).

For example, a man named senior associate in research or engineering has the same status (from the standpoint of job level, salary, and prerogatives) as an assistant director in administration.

Observes Esso Research President Eger Murphree, "The two separate sets of rungs rising from a broad common base were built that way on purpose. Technical men in the company, according to their abilities and desires, can move upward along either ladder equally fast. There is nothing very fixed about climbing these two ladders."

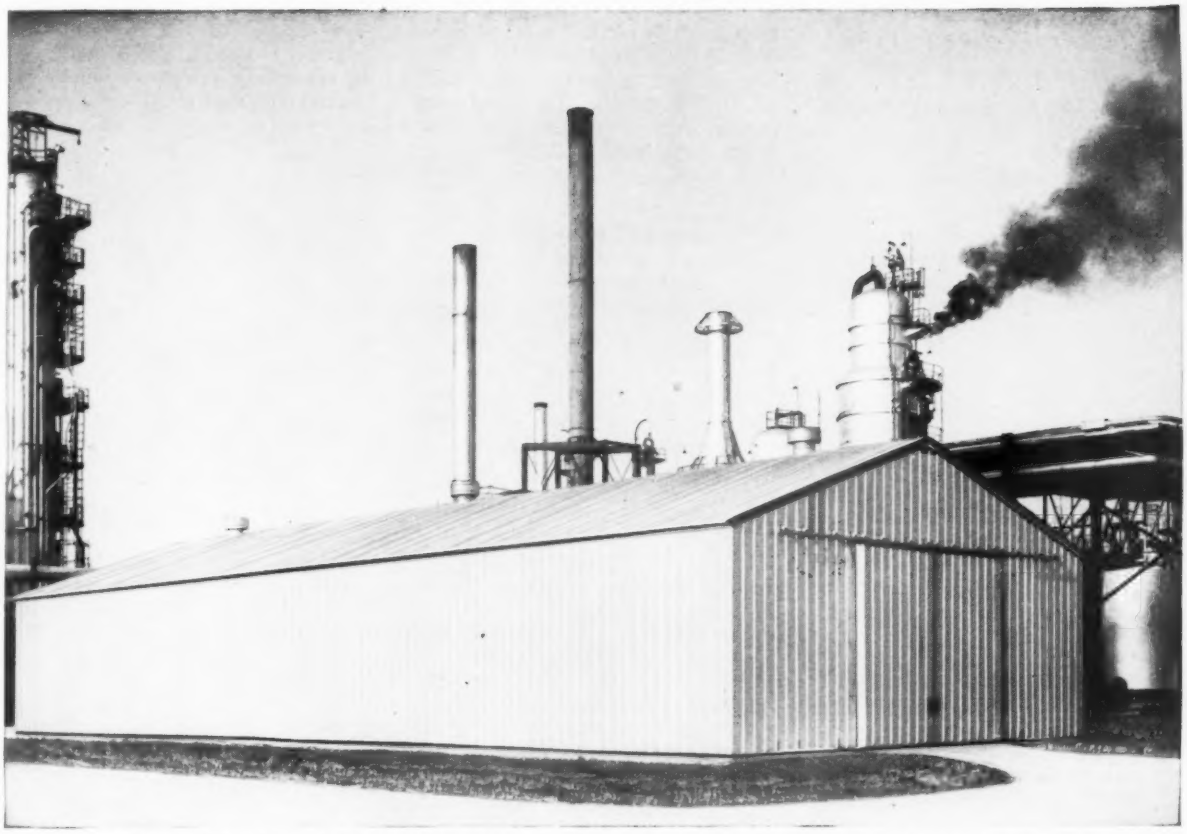
The company believes most switching will occur along the broad base. Example: A group head may serve for a time as a project engineer or project chemist.

However, Murphree says that freedom for lateral movement in all rungs is "possible and desirable." And he adds, "Our new ladder is an extension ladder. It may be extended higher, and more rungs may be added. For instance, the words 'or equivalent' under the title of scientific advisor constitute an open door that will permit us in the future to add a different, but equivalent, title."

Details of the ladder were largely developed by the Employee Relations Division (then under the direction of Arnold Kaulakis) and by the firm's salary and classification committees.

The ladder is roughly similar to those being used by such companies as California Research Corp., Indiana Standard, Union of California, Humble, Du Pont, and Monsanto. But Esso Research's program is noteworthy in that it matches technical and administrative titles.

The company has officially raised its technical ladder by naming 13



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". . . our objective is to see that the men as well as the company keep moving up . . ."

TECHNICAL LADDER starts on page 36.

men to the new associate rung—7 in research and 6 in engineering. In addition, the affiliated Esso Research Labs in Baton Rouge have appointed two men to this same rung, one in research and one in engineering.

"The early appointments are not really promotions," says Persons. "We actually are merely recognizing where these men already are."

The new associates are of two types. One comprises the experts in important but specialized fields, men who may contribute many patents. The other is composed of men of broad technical competence who can bring to bear a range of thinking across many fields.

The new associates are established engineers and scientists. One, a 22-year veteran with the company, has specialized in the technology of asphalt production. He has more than 20 patents. Another has 63 patents in the fields of additives, resins, synthetic rubber, and surface coatings.

There are no fixed qualifications for the top technical rung—scientific advisor or its equivalent. But it goes to company men who are widely recognized authorities, in and out of the company—men of unusual stature in the industry. First to be designated scientific advisor is W. J. Sparks, co-inventor of butyl rubber.

The title of senior associate is reserved for those whose contributions have raised them above the associate level. Persons says this level, like the others, is hard to define, but that senior associates are men of considerable technical competence (for example, in the field of catcracking) who are accepted as authorities.

Esso Research has no "point system" for appointing men to the ladder. It appraises their work through salary and classification committees, and views designation to various rungs as "a matter of judgment by enough people."

Says Charles Smith, employee relations director, "We think the firm, technical job-description sheets of some companies are hard to use effectively. It's not too hard to rank men at the top or bottom. But you have a hard time in the middle.

"We judge on technical competence and achievement. However, you can't use the number of patents as a measure of achievement. The chance for patents is much greater in some divisions then in others. Also, a man may not realize positive results on a project, but he might come up with negative findings of great value. And rating on prominence isn't fair to the man whose work is on a confidential project."

The appraisal, especially of younger men, overcomes the common complaint of professional men that they have little measure of their own progress.

Newcomers are rated after about 6 months, 12 months, and 20 months, on the basis of job performance and technical competence.

"Most technical men," says Smith, "are evaluated once a year by their own supervisors and as many others as know the men's work. Our aim is to tell each man how he is doing. His weakness and strong points are covered. He gets information on his future prospects.

"In some cases, only informal comments are necessary, especially for the veterans. The appraisal is especially important for men in their early years with the company."

Esso Research leaves little room for complaints that men are "hidden." The company helps publicize the work of its engineers and scientists, inside and outside the company. Important in this effort are the semi-annual technical meetings, attended by a total of 400 to 500 of the top technical men working for Jersey Standard affiliates.

About 60 papers are presented at each meeting, bringing recognition to the authors.

Esso Research also favors outside publication of technical papers. It pays for its men's dues in certain technical societies and their expenses to society meetings, and encourages them to work on society committees. Starting at the senior associate level, men may attend as many technical society meetings as they wish, at company expense.

In publicizing technological advances made by the company, the public relations division often plays up the man or men actually doing the work. This publicity includes release of photographs of men posing with new devices. "However," Persons observes, "we stress team effort, and are careful not to undermine this."

Esso Research also recognizes the value of patents by paying $50 to the author when the application is filed and $100 when the patent is issued.

To avoid protests by professional men that they are "bottle washing" —instead of working toward real contributions—Esso Research is using operations analysis to insure the maximum productive use of manpower. And it is employing girl mathematicians to carry through the calculations on many projects. We have 18 of them now," says Smith, "and are looking for more.

"These engineer assistants are usually BA degree graduates. They are not technicians, but professional people, with primary skills in mathematics. They have been a big help, and two have been on trips to affiliates. Earlier, we might have had to send an engineer."

In addition, the company is stepping up the use of computers to reduce "mathematical drudgery," as well as to find new ways to solve complex design problems.

Esso Research pours oil on the "high starting salary" tempest by maintaining a spread between existing employees and new ones. This is always a problem," says Persons, "and occasionally the competition for college men closes the gap. But we review salaries continually and make adjustments to maintain the differential."

He continues, "The salary question of merit vs. seniority is not an issue. We pay and promote on merit."

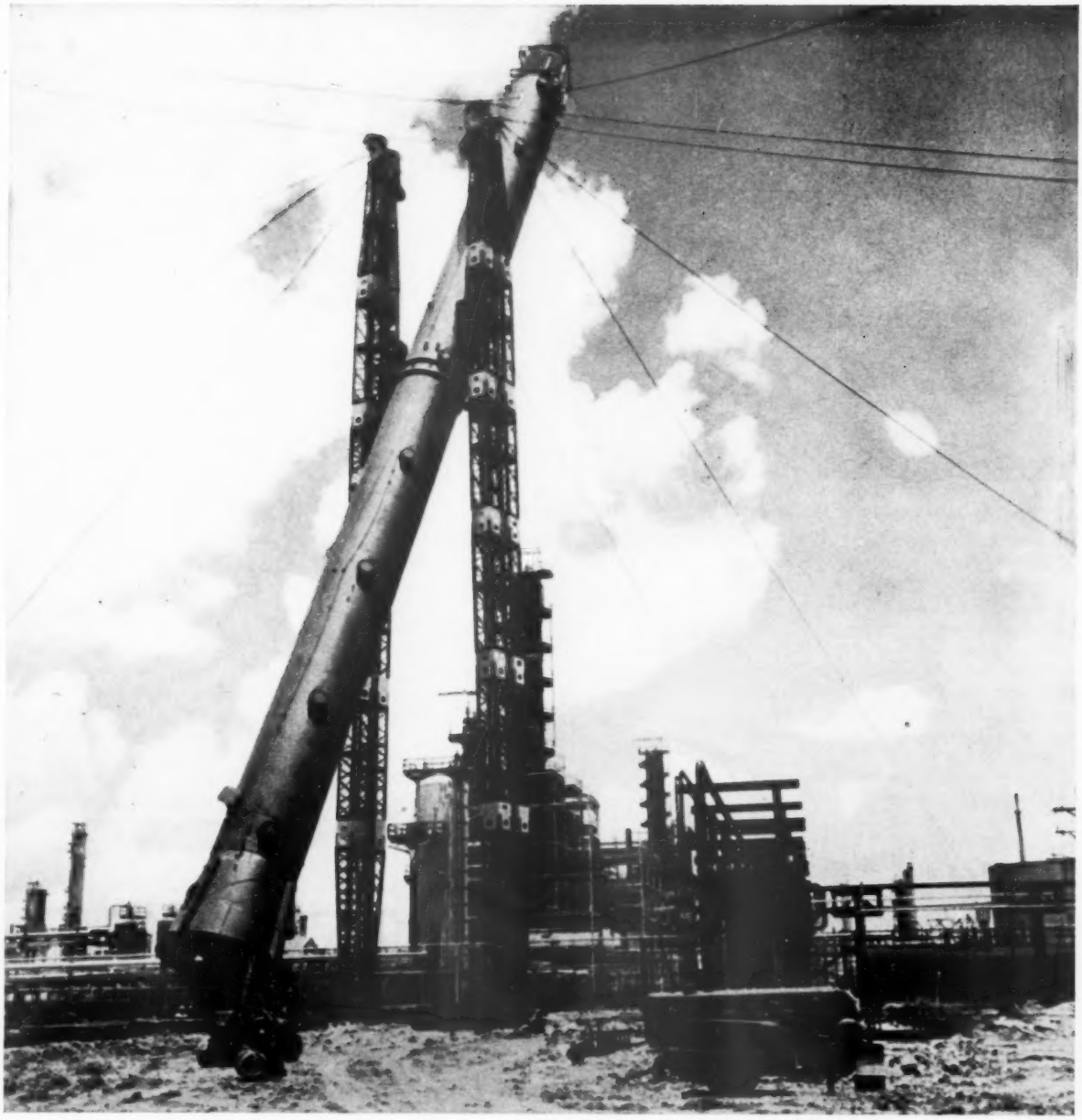
Toughest problem of all for Esso Research is its own rapid expansion. The technical ladder, plus its supporting programs, combine to help provide the company's solution.

"We have doubled in size since the war," Persons points out. "We have added new levels of supervision. We are now expanding our efforts both in the U. S. and abroad. Communications lines are long and complex.

"This raises the question of how to get information down through the ranks and back. There's the matter of relating the individual project to overall company work. The problem is very real with the younger men, who need help in learning more about their own expanding fields of work, and about the company. And we see the need for even more training than we are doing in supervision, report-writing, and other skills."

"In a sense," Persons concludes, "all our policies in appraisals, salary administration, and publicizing men's work are an attempt to lick the expansion problem by recognizing the individual employee. And the new technical ladder is actually a framework on which a lot of this work will be done.

"Our objective is to see that the men as well as the company keep moving up."



"Over the years, Jersey's expenditures for capital equipment, and costs relating to the search for and development of new oil reserves, have been very large. For the current year they will amount to $3 for each $2 of last year's profit."

M. J. Rathbone, President, Standard Oil Company (New Jersey)

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What's New IN MANAGEMENT

Manpower Hide-and-Seek

The scramble for good technical talent is forcing some oil companies to "hide" the men they have employed. They find this is necessary to avoid having competitors hire away top young engineers and scientists.

For morale purposes, companies such as Esso Research & Engineering encourage as much publicity for professional men as possible (page 38). But, especially in the oil country, other managements are finding such a policy damaging. Sample comment from oil companies in the Southwest:

- "We lost four men recently, just because their pictures appeared in the press. When our engineers get publicity, they are literally deluged with offers that carry a higher price tag than we can possibly pay. This isn't just from oil companies, but from other industries as well. We don't intend letting our competition know the names and locations of any of our engineering trainees if we can help it."
- "We frown on having our men named in reports at meetings, or in articles. It seems the other companies scan these, and the next thing we know, we have lost another engineer. This is particularly true of material published on such subjects as corrosion."

•

Indiana Standard is decentralizing its law department operations. Last week the company opened a department branch office in Kansas City, with J. H. Childers in charge. The office will serve Kansas, Missouri, and Oklahoma.

This is the first office Standard has established under a new program to handle legal services for operating departments at field locations. The move is part of a broad-scale plan that has decentralized many company operations.

•

Another big deal to pool the resources of Canadian independents is in the works. Home Oil Co. and Merrill Petroleums may merge, to form one of the strongest independent operations north of the border. The companies have asked in financiers to help work out financial complexities.

Part of the deal would be Merrill's Cascade Drilling Co., the fourth largest contractor in Canada. Also involved is Home Oil's Cremona Pipe Lines, which operates a 65-mi. crude line in Alberta.

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So, team up to make Oil Progress Week —*your week*—a big success. Clip out and mail this coupon today!

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DEPT/Refining

Butadiene to Keep Stepping

A lot more of this raw material for synthetic rubber will be needed in the next few years. Don't be surprised if a good part of it is made by oil companies.

Fast-growing butadiene demand—as reflected in new manufacturing plants like Odessa Butadiene Co.'s 50,000-ton-a-year facility, which will come on stream this month—is making refiners sit up and take new notice.

The Odessa plant (picture), at Odessa, Tex., is the latest of several recently completed butadiene plants. Others are Firestone Tire & Rubber Co.'s Orange (Tex.) plant, which is producing 40,000 tons a year (PW—Jun.21'57,p44), and Texas Butadiene & Chemical Corp.'s Houston plant, which can make 86,000 tons a year (PW—Apr.26'57,p65).

The Odessa plant won't stop at butadiene—a primary raw material for making synthetic rubber. It is the first plant built since World War II with complete facilities for making synthetic rubber from butanes.

The major processing units at Odessa's new plant are a field butane section, a dehydrogenation section, an absorption and fractionation section, and the butadiene recovery section.

The $20-million plant was designed, engineered, and built by Fluor Corp., Ltd., of Los Angeles.

U.S. butadiene capacity, now estimated at 816,000 tons a year, will have to top 1-million tons a year by 1959 to keep up with estimated demand.

The Office of Defense Mobilization estimates that about 233,000 tons a year will have to be added to butadiene capacity because of this rising demand. Most of this increase will be tied to a rise in demand for synthetic rubber.

The expansion could be even larger, however, if the use of butadiene for making other petrochemicals and chemical intermediates develops as expected.

For refiners, more butadiene means, first of all, a stronger, more stable market for one of the lighter materials they usually have in long supply—normal butane.

Butadiene can also be made from normal butylene.

But normal butane, in long supply most of the year and much cheaper, will be the feed-stock for practically all butadiene units operating or planned.

The market for butane is generally a buyers' market—except for the few months when extra butane is needed for blending into "winter" gasoline to raise volatility. As a result, normal butane can be had for about 5.5¢ a gal. or less most of the year.

The increasing use of normal butane as butadiene feed stock means that refiners and field processors will soon be able to get a better price for what has been "cheap stuff."

Too, some refiners are thinking about cutting directly into the butadiene pie. So they're studying the Houdry fixed-bed dehydrogenation process in use at existing butadiene plants.

Esso Research & Engineering Co. recently licensed the Houdry process for use by one of its subsidaries. However, Esso Research will not say whether the process will eventually be used to produce butadiene.

Four refiners are weighing the possibility of licensing the Houdry process, and they're thinking in terms of butadiene production.

And two others, Standard Oil Co. of California and Sun Oil Co., have already licensed the process.

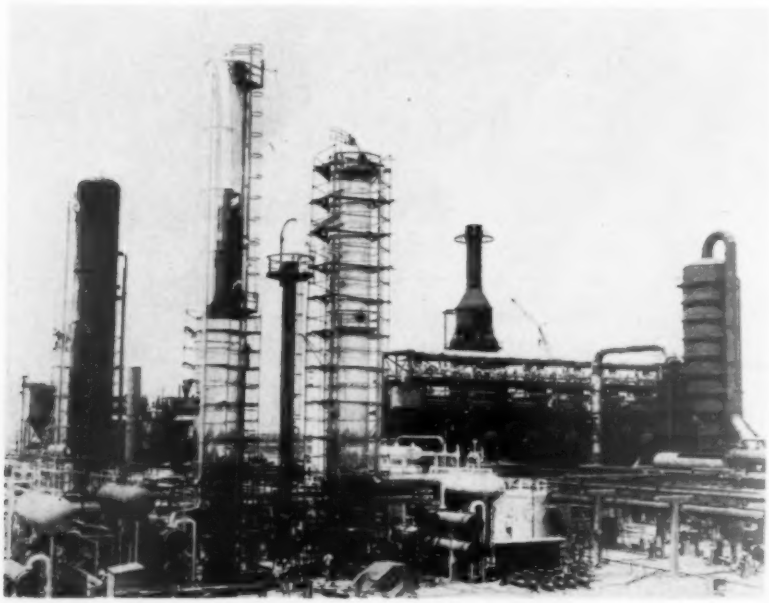
The Houdry process also makes it possible for refiners to produce alkylate with a fair return.

The use of high-octane alkylate as a motor gasoline blending component has been steadily increasing in recent years. However, the cost of making alkylate is high. Alkylate feed stock, especially isobutane, is expensive. As a result, the economics of alkylation cost recovery are tight.

In dehydrogenation of normal butane, however, butadiene, isobutane, and butylenes are produced. When alkylate demand decreases, the isobutane and butylenes can be recycled to make more butadiene. Refiners call this an important yield flexibility, and some say that it may be the answer to the cost problem of making alkylate.

There is also interest developing among refiners for making butadiene in a fluidized-solid catalytic process (PW—Jun.28'57,p50).

A Gulf Coast refiner is now considering building a fluid-type process for dehydrogenation of light hydrocarbons, probably butanes. Other companies considering manufacturing butadiene will also weigh this method.



NEWEST BUTADIENE PLANT, now ready to be put into operation by Odessa (Tex.) Butadiene Co., will make 50,000 tons a year and use it to make synthetic rubber.

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Wastes Go Down the Drain

Having trouble with waste disposal at your refinery? Try this one on for size: Shell Chemical Co. has just completed drilling a waste-disposal well near its Houston plant.

Shell Chemical spent about $166,000 to complete the 7,650-ft. well. The 19-day drilling schedule was completed by Shell Oil Co.'s production department without serious and unusual problems—thanks to preliminary work done by Shell geologists.

With the well completed, evaluation tests—injections of fresh water and process streams into the sands below to check the rate of injection—were carried on. The big question such tests had to answer: Would the sand take on the material fast enough to make the process economical? The verdict was positive.

Shell will pipe waste materials from units at the Houston plant to the well. Then conventional production equipment will pump the waste down the well and inject it into the sands below.

Shell will use a centrifugal pump for injection. Shell geologist now figure that the sands at the 7,650-ft. level will be able to take high-volume injections and disperse the material quickly.

Shell took great care to be sure there would be no contamination of fresh-water sands.

The sand into which the waste will be injected is 3,000 ft. below the nearest fresh water, with impermeable rock between the two.

Surface casing was set to 3,000 ft., and another string run to total depth.

Shell hasn't had time to figure for sure, but it believes that the well will provide a more economical means of waste disposal than do the methods now in use at the Houston plant.

Before the well, Shell took its waste out to sea—about 125 mi.—and dumped it in water ½ mi. deep in order to avoid water pollution or fish execution. The company disposed of about 250,000 gal. of waste a month this way. The cost of such deep-sea disposal is estimated at $3.50 a ton. It is hoped that waste disposal by well will beat that hands down.

There is special interest in Shell's well because it is on the Gulf Coast, where refiners have had more-than-usual difficulty in disposing of process wastes. As a result, many other Gulf refiners—as well as refiners in other parts of the country—may become interested in the idea.

DRILLING, PROCESSING UNITS intermingle at Shell Chemical Co.'s Houston plant. Result: better waste disposal.

Other processors interested in waste disposal wells may have their minds made up for them by factors beyond their control—geological factors.

Shell decided to go ahead with its disposal well only when its geologists were sure that underground formations would not make costs prohibitive. Drilling costs, of course, vary widely with the type of earth structure being penetrated. And sands, either too small or too deep, can also make such a well unattractive, cost-wise, in comparison with other methods of waste disposal.

Shell certainly weighed other methods of waste disposal before drilling. Water scrubbing, for instance—in which waste hydrocarbons are diluted so they can be discharged into a stream without polluting it—was deemed too expensive.

Another possibility, dumping waste into dry holes, was called impractical because there were no dry holes close enough to the refinery.

Burning waste is still another alternative. But with rising complaints about air pollution (and a tendency for the public to blame a good part of such pollution on refineries), Shell decided against such burning.

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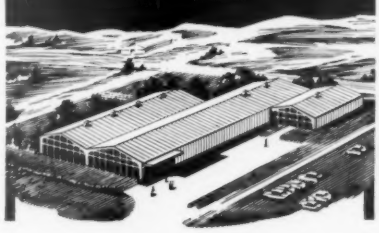

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What's New / IN REFINING

Military Weighs Change In Engine Policy

A group of military equipment experts have just recommended a changeover from spark ignition engines to compression ignition engines in the vehicles of tomorrow's Army. The U. S. Army Armor Board made the recommendation last week.

If adopted, the suggested policy would, of course, eliminate the need for gasoline as an engine fuel.

According to the board, compression-ignition fuels—kerosene, JP-4, diesel fuel, cracking stock, and crude oil—would free the Army from the dependence upon refineries, and thus reduce the Army's vulnerability to interruption or curtailment of fuel supplies.

•

Utoco Begins Expansion

A new crude still which will hike capacity at Utah Oil Refining Co.'s Salt Lake City refinery 6,000 b/d, to 35,000 b/d, is the first step in the company's new $16-million expansion program set for the Intermountain area.

The $2-million crude still will be built by Flour Corp. It is the first of several expenditures to be made by Utoco's manufacturing department in the five-year expansion program now getting under way. During that period, $8.4-million will be spent on manufacturing. The company will also spend $7.8-million on marketing expansion during the next five years.

•

Husky Oil, Ltd., will begin a $700,000 expansion program at its 4,000 b/d Ft. William (Ont.) refinery this fall. No increase in capacity is planned. Instead, Husky will add a Dieselformer, storage tanks, and new crude and product handling facilities.

•

Sinclair Oil & Gas Co. will build a deisobutanizer at its No. 6 gas products plant at Covington, Okla. The new unit, scheduled to go on stream next January, will have a charge capacity of 20,000 gal. a day. It will separate isobutane from normal butane produced at the plant. The isobutane will be sold as charge stock for making a high-octane gasoline component.

The Covington plant processes 18-million cu. ft. of gas daily. It recovers about 55,000 gal. of liquid hydrocarbons a day.

•

El Paso Natural Gas Products Co. has just completed arrangements for financial backing of its current expansion program.

El Paso Products, subsidiary of El Paso Natural Gas Co., has just arranged for a $33-million credit agreement with ten banks. Most of the money will be used to build a refinery and styrene plant at Odessa, Tex. and another at Ciniza, N. M., and for completion of the company's butadiene plant.

•

Caltex Maatschappij has just put a 7,500 b/d Platformer and two Unifining units on stream at its Pernis refinery in the Netherlands.

Both the Platformer and the Unifiners have been licensed from Universal Oil Products Co.

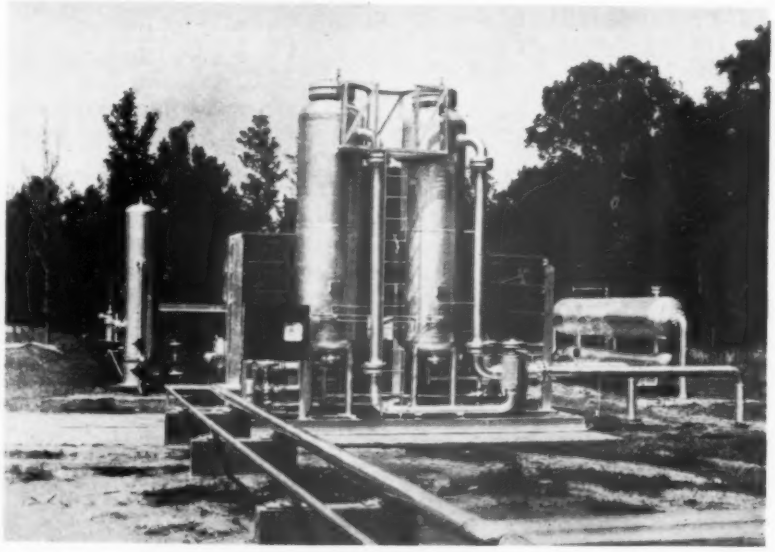
The Platformer is producing high-octane gasoline components from naphthas made from Arabian crude. One of the Unifiners—a 7,500 b/d unit—can remove sulfur and other impurities from Arabian straight-run naphtha or from blended straight-run and thermally cracked naphthas. The other Unifiner, with 4,500 b/d capacity—is designed to desulfurize diesel fuels.

•

A new petrochemical firm has been formed by BP Benzinund Petroleum GmbH and Farbenfabriken Bayer.

BP and Bayer will each have 50% participation in the new company—which as yet has no official name or address. Its process units however, will be built adjacent to the Bayer plant at Dormagen, near Cologne. About 300,000 tons of feedstock for the units will be supplied by a new BP refinery to be built in the Ruhr.

The feedstock will be used to make a variety of organic semifinished products.



New Small-Stream Adsorption Unit

This new natural gas adsorption unit—Delta Tank Mfg. Co.'s "Dryex"—can reportedly recover raw gasoline previously lost by not processing small, lean gas streams.

Delta says the unit now makes it profitable to process natural gas from wells that produce from only 2-million to 20-million cf/d. One third of the nation's natural gas production comes from wells of this size.

The unit can also be used on larger, rich gas flows. It is said to recover up to 85% of commercially valuable liquids in a stream. Prices of Dryex units vary from $800 to $1,400 per bbl. of daily recovery capacity. Minimum recovery capacity is 40 b/d.

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DEPT/Marketing

Jobber Growth Pegged to Money and Men

A new survey of oil jobbers and their suppliers gives a check-list for jobber efficiency. Some musts: up-to-date accounting methods, well-trained personnel.

Improved accounting and upgraded personnel policies are the most important steps toward greater jobber efficiency in the eyes of top jobbers and major-company men. These ideas headed a list of 400 suggestions from 100 top jobbers and 100 key marketers surveyed by National Petroleum News, McGraw-Hill magazine of oil marketing.

The increasingly competitive field of oil marketing is forcing many jobbers to bring their management techniques up to date in order to stay in the race. The hard facts are seen in this statement by one marketing vice-president: "Many of today's jobbers have to become more efficient managers or they're going to die."

Improved accounting—and more creative analysis of accounts—is singled out by both majors and jobbers as the number one field for upgrading jobber efficiency. Typical of their comments:

A marketing executive: "Many jobbers don't know if they're even making money. And when they do know, they often can't tell how or why."

A jobber: "We all know we need better accounting methods . . . but a lot of us seem to think guessing is more fun or sporting."

Basic to good accounting is a good set of books and a system set up by a qualified accountant.

One jobber suggests: "Install an up-to-date accounting system. Know what your costs are. Throw out anything that doesn't return a profit."

Big gallonage means nothing if profits are small. The jobber shouldn't run his business on a day-to-day basis, but should always keep looking ahead. This safeguards him against snap decisions and unforeseen expenses in the future.

The second-most frequent efficiency suggestion in the survey was to upgrade personnel policies. The means for doing this is outlined in a five-point personnel program:

- Be choosy—and don't be stingy.
- Increase on- and off-the-job training.
- Encourage employees with wage incentives, recognition, and constructive leadership.
- Assist employees when they need it—especially new dealers.
- Treat your people with respect.

Direct delivery from the supply source to customers is one of the best ways for a jobber to build a more efficient delivery system, jobbers and majors agree.

Direct delivery usually costs no more than a bulk plant delivery. And it saves the cost of throughput at the bulk plant, and the truck and driver cost for redelivery.

Routing should be modern, regular, and "scientific," say key marketers. The most successful jobbers don't deliver beyond the "economic radius" of their plants—no matter how tempting the account may be.

Jobbers should be willing to invest in larger equipment in order to compete. By tightening credit controls, they can get more working capital to make such investments.

More and more jobbers today are investing in larger trucks, larger storage facilities, and larger-capacity pumps and lines at bulk plants. However, most suppliers say that too many jobbers are not keeping up with this trend.

The need to tighten credit controls was mentioned frequently by both jobber and supplier.

Lenient terms and slow collections are tying up working capital that could otherwise go into fixed investments, to reduce borrowings (and thus save interest and charges), or earn cash discounts.

Jobbers and suppliers agree that the best solution to this problem is to spend more time on credit and to scrutinize books more closely.

A credit policy should be "rigid enough to maintain adequate control and flexible enough to meet the challenges of unusual situations," says one major-company man.

Suppliers have a wealth of experience and services ready to give their jobbers, if they'll just ask for it. More jobbers should take advantage of this, say suppliers.

A jobber can get everything from blueprints and reports to specialists and bank loans from his supplier, suppliers and jobbers told NPN. They're often in a position to keep jobbers posted on changes in products, methods, road routes, and population.

And, "too many jobbers attempt to

Unique Station 'Sign' Draws Customers

An attention-getting 36-ft. arch, made of laminated wood, is getting customers for this Zephyr gasoline station in Rock Hill, Mo., suburb of St. Louis. The three-armed arch, floodlighted at night (above), can be see for many blocks. That's why J. D. Streett & Co., operator of the station, picked the unique design—to make the station stand out on this heavily traveled and many-stationed road. There was another reason, too: A local ordinance limiting sign size ruled out the use of a spectacular. Transparent blue canopies over the center island catch the eye, too.

keep the supplier at arm's length," points out one jobber.

Without spending too much money, a jobber can call in outside advice to size up his operations and tell him how he can best improve his management, say those surveyed.

One of the best sources for outside advice is the local banker. Professional management consultants are another source, but the jobber should be sure he knows what the fee is before he seeks this type of help.

There are other yardsticks for business knowhow: financial publications and reports, jobber management institutes, and views of other oil men.

Suppliers and jobbers agree that a knowledge of market potential is paramount to an efficient jobbership. For the jobber who can't afford a full-time market researcher, there are inexpensive methods of getting such information.

Market research can be as simple or as complex as you want to make it, says NPN's survey. One of the best sources of assistance is the supplier.

An up-to-date accounting system supplies much of the necessary groundwork for market information. From there, the jobber can go after more information about his operations, his customers, his competition, equipment, and business trends.

Keeping outlets and equipment looking "ship-shape" and stressing customer service are good guideposts to bigger jobber profits, say jobbers and marketers surveyed.

Outmoded stations should either be eliminated or modernized to keep up with competitive stations. Every jobber should have a station modernization and replacement program, says one marketing man.

The push for higher sales figures can be achieved more readily by the use of stronger inventory controls and by working for a balance in product sales, jobbers and suppliers told NPN.

Product slips away from many jobbers because they fail to keep tabs on inventory records or take tight enough stock-loss control measures. The first step is to keep more complete records, say both jobbers and suppliers.

Most successful marketers say that hitting a balance in product sales can lead to higher sales figures. The jobber should develop sales in all available directions that will produce a profit.

It can be boiled down to this, according to those surveyed: Gasoline jobbers should look into fuel oil, fuel oil jobbers should look into gasoline, and both should look into TBA and other products.

What's New
IN MARKETING

National weighted average octane ratings rose 0.2 numbers in June for both premium- and regular-grade gasolines, hitting 98.2 and 91.0, respectively.

The increases are reported in the latest Ethyl Corp. 57-city survey. Premium was 1.2 numbers higher than a year ago, regular 1.0 higher.

Premium averages of 99 or higher were reported by 7 cities; regular averages of 91.5 or higher by 18 cities. Ratings for companies marketing more than one grade of premium were up, too—ranging from 100.2 to 102.0 for the highest grade, compared to a range of 100.3 to 101.8 in May.

Average tetraethyl lead contents also increased from May to June in both premium and regular.

•

Shell Oil Co. is making sure that its industrial products managers learn some fundamental facts about atomic power. A recent seminar in San Francisco was aimed at familiarizing these men with the terminology, operation, application, and future development of nuclear energy. Thus, the company hopes to keep abreast of this rapidly expanding field.

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Lion Oil Co., a division of Monsanto Chemical Co., is offering its dealers an intensive training program in service station operation—as part of a "stepped up" campaign to improve station marketing facilities. The training will be on a continuing basis with frequent "refresher" sessions.

Lion has also designated a company-operated station in El Dorado, Ark., which will serve as a training base for new and prospective dealers.

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A new service station lift—designed to service today's low-slung cars and sports cars—has been introduced by Wayne Pump Co. All dimensions of the lift have been lowered so that even the low-slung Thunderbird has at least a 2-in. clearance.

•

Tidewater Oil Co. last week purchased a chain of more than 50 service stations in Pennsylvania. The outlets, operated by Voltz Oil Co., of Bristol, Pa., reportedly sold for more than $500,000.

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Gas Pipelines Pace Canada Boom

At least $2-billion will be spent in Canada over the next five years to push the country's gas industry. Biggest item in the spending program is pipelines.

Natural gas producers, pipeliners, distributors, and appliance makers will all participate in a $2-billion boom in Canada over the next five years, according to D. K. Yorath. He's president of Canadian Western Natural Gas Co., Ltd., of Calgary, and Northwestern Utilities, Ltd., of Edmonton.

His forecast was presented at the 50th annual meeting of the Canadian Gas Assn., held at Jasper, Alta.

Yorath says the expectation of $2-billion in capital expenditures, as a result of the country's rapidly rising interest in natural gas, is only "reasonable." He doesn't include expenditures to be made in the U.S. for pipelines to take gas from Canada, or to sell U.S. gas to Canadian pipelines; he takes only presently known expansion projects and present population figures into account; and he includes "nothing for exploration, acquiring of gas rights, and other considerable but immeasurable items of this character."

New transmission facilities will account for the biggest item in the spending program—about $629-million, according to Yorath.

This is broken down, he says, into $345-million for main transmission lines, $30-million for major branch lines, and $54-million for the Alberta Gas Trunk Line system, which will feed Alberta gas to the Trans-Canada trunk.

Field gathering systems will account for another $25-million, he says, including anticipated compressors.

New production facilities will result in expenditures totaling $95-million, including expenditures for processing plants, Yorath predicts.

About $335-million will be spent on distributing systems, $240-million on new appliances, and $140-million for appliance piping, installation, and controls, he figures.

The distributing system estimate

New-Type Offshore Storage Platform

Instead of the usual upright tanks, this offshore storage platform features a horizontal battery, with an overhead deck for pumps and other operating equipment. The platform was built by Todd Shipyards Corp., at Houston, for Jay McDermott, Inc. It will be installed on a Phillips lease in the Gulf of Mexico, 65 mi. South of Morgan City, La. When the platform is in place, the tanks will be 50 ft. above the waterline. The tanks hold a total of 17,000 bbl. Crude will be piped to the platform, then barged to shore.

was arrived at on the basis of $400 per new customer in the fifth year of development, and $200 for existing customers now served with manufactured gas or propane-air. Toronto customers, for example, are included in the latter.

These producing, gathering, transmitting, distributing, and consuming facilities add up to a "conservative" $1½-billion—pegged to known factors, he says.

Almost another $500-million can be counted on as the amount to be spent in drilling for new gas, building new industries to use gas, construction of another gas trunk out of Alberta, and construction of new buildings, shops, etc., by companies handling gas, according to Yorath.

He uses a figure of $100-million for new well-drilling (in Alberta alone)—a figure originally estimated by A. G. Bailey, vice-president and general manager of Bailey Selburn Oil & Gas, Ltd.

He quotes A. P. Craig, vice-president of Trans-Canada Pipe Lines, Ltd., as saying that at least $200-million will be put into new plants in Canada because of the availability of natural gas.

Yorath himself figures at least $10-million will be needed for new administration buildings, shops, and other buildings by the companies involved in the gas boom.

A new pipeline out of Alberta, which would cost at least $180-million, is likely because of Alberta's huge gas reserves, Yorath indicated.

Present reserves in the province are officially rated at 18.3-trillion cu. ft., of which 5¾-trillion cu. ft. is now authorized for export.

But the total needed for Alberta consumption over the next 30 years is only about 7.6-trillion cu. ft., he notes, whereas reserves are likely to hit 42-trillion cu. ft. by 1986.

This estimate, says Yorath, is based only on the assumption that drilling rates—and the ratio of gas discoveries—will continue along present lines. But Yorath believes that "drilling for natural gas as the main object of discovery will be accelerated beyond the conception of anyone a year ago," and that the 42-trillion figure will be reached even before 1986. From a geographical approach, he says, Alberta's ultimate total reserve may be about 75-trillion cu. ft.

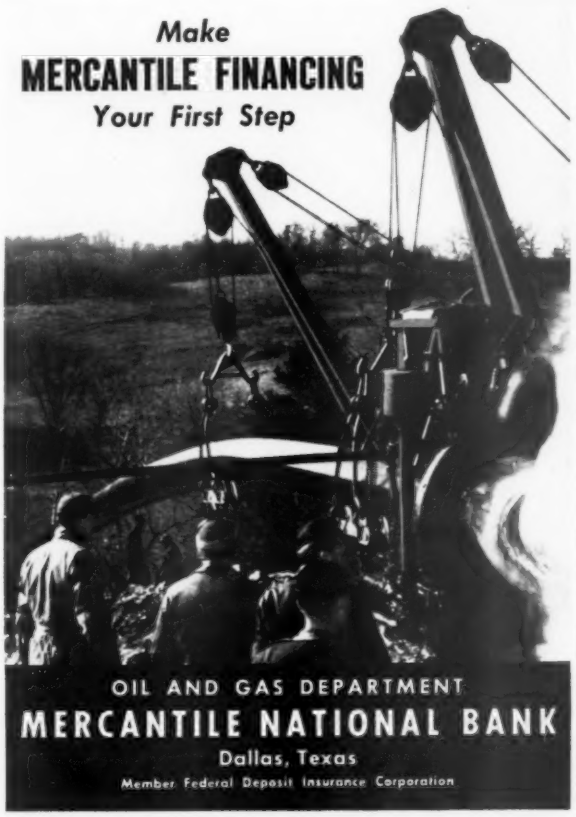
Capital expenditures for natural gas in Canada will outweigh total costs of the St. Lawrence Seaway project—and produce more power, says Yorath.

He figures the seaway and attendant expenditures for power development will total $1.1-billion, compared with the $2-billion he foresees for gas development.

The daily energy involved in the gas program, taking into account only the initial peak-day potential of Trans-Canada and Westcoast Transmission Co. trunks, is equivalent to more than 1-trillion Btu., he says, compared with 2.2-million hp. to be produced by the St. Lawrence project. This gives the gas development more than 7½ times the daily energy involved in the seaway plan, he says. And the seaway costs include expenditures being made in the U.S., whereas the gas development figures are strictly for Canada.

By 1980, natural gas will be supplying 25% of Canada's fuel energy, with petroleum inching up to 45% of the market, coal slipping to 16%, and atomic energy making a 2% inroad, according to Yorath. He figures water power will have an 11% share, and wood will have a token 1%.

The 25% figure for gas, he explains, may not look like much, considering the fact that gas already held 26% of the fuel energy market in the U.S. by 1955. But, he notes, gas held only a 4% share of the Canadian market as recently as 1953—equivalent to the U.S. level in 1920. So the growth rate



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for gas is higher in Canada than in the U.S.

For comparison with the other fuel energy sources, he uses 1953 figures of 42% for petroleum, 39% for coal, 8% for water power, 7% for wood, and, of course, nothing for nuclear power.

The electricity produced by many of these primary forms of energy will, in turn, compete with gas heavily in some fields, particularly in domestic cooking, says Yorath. However, he notes, while electricity "cannot heat buildings economically in below-zero weather, natural gas can be and is being used to generate electric power."

What's New / IN TRANSPORTATION

Four interstate pipeline firms are fighting a tax battle with the Mississippi Public Service Commission.

The PSC has asked the State Tax Commission to assess United Gas Pipe Line Co. $15,440.60; Texas Gas Transmission Co. $1,463.80; Southern Natural Gas Pipe Line Co. $2,975; and Olin Transmission Co. $3,555—on the basis of the firms' direct sales to industrial consumers. The action followed complaints to PSC from three Mississippi utilities, who say they're paying an unfair share of PSC's operating costs while their interstate competitors pay nothing.

The transmission firms contend their interstate status exempts them from PSC rate regulation—and from taxation for PSC support, as well.

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The U.S. gas industry will spend a record $2.1-billion this year for new construction and expansion—almost half for transmission programs.

The outlook was reported by the American Gas Assn. last week, after a national survey.

Aga says this year's spending will top last year's all-time high by 37%.

The breakdown: slightly more than $1-billion for transmission purposes; $560-million for distribution; $380-million for production; $106-million for general purposes; and $54-million for underground storage.

The four year outlook—through 1960—is also up. The forecast is for expenditures of $8.7-billion, compared with $5.3-billion in the previous four-year period.

The four-year breakdown includes: transmission, $3.9-billion; distribution, $2.8-billion; underground storage, $353-million.

The gas industry now has a network of mains stretching almost 524,000 mi., says AGA, after adding 28,450 mi. in 1956. Transmission facilities were expanded by 7,900 mi., field and gathering networks by 1,840 mi., and distribution mains by 18,710 mi.

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Three Southern California gas utilities are trying to block an electric company's plans to use more gas for boiler fuel.

Southern California Gas Co., Southern Counties Gas Co., and Pacific Lighting Gas Supply Co. have asked the California Public Utilities Commission to stop construction of a $24-million pipeline projected by Southern California Edison Co. (PW—Jul.5'57 p50).

The objectors say the plan would divert part of the state's limited gas supply solely for boiler fuel and is, therefore, "detrimental to public interest."

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DEPT/Personals

SAMUEL K. McCAULEY, Atlantic Refining Co., is the new president of Iricon Agency, Ltd, succeeding **John W. Gendron,** Tidewater Oil Co. Other new officers are **A. H. Elliot** of Iricon's London office, executive vice-president; **David E. Day,** Richfield Oil Corp., and **R. S. Stewart,** Standard Oil Co. (Ohio), vice-presidents; **C. F. Krug,** Getty Oil Co., treasurer; **Harley C. Stevens,** American Independent Oil Co., assistant treasurer; **Harold A. Black,** Los Angeles, secretary and general counsel; and **John K. Schemmer,** San Jacinto Petroleum Corp., assistant secretary. Three new directors of Iricon are **Benjamin Tyran,** American Independent, **B. H. Dresser,** Hancock Oil Co., and **F. D. Lortscher,** Signal Oil & Gas Co.

S. K. McCauley

P. J. Anderson

PAUL J. ANDERSON has been appointed senior representative in the United Kingdom for Standard Oil Co. (N. J.). He is succeeding **H. W. Fisher,** who, as previously reported (PW—Jun.21'57,p60), was named joint managing director of Iraq Petroleum Co. and its associated companies. Anderson will continue as Middle East representative of Jersey Standard in London.

J. P. SCHMALZ has been made superintendent of Tennessee Gas Transmission Co.'s central production division office, moved recently from Ft. Worth to Midland, Tex. Two new district offices have been created, to be superintended by **D. P. Dampf,** at Hobbs, N. M.; and **J. D. Hicks,** at Odessa, Tex.

G. H. LOWDEN will head the newly opened sales office in Detroit for Enjay Co., petrochemicals marketer. Another new sales office also has been established in New Orleans by Enjay.

CONTINENTAL OIL CO has made five personnel changes in the Rocky Mountain area. In Casper, Wyo., **Donnell O. Wells** has been promoted to titleman. He suceeds **Robert F. Hannifin,** who takes over additional scout and leaseman duties. **William S. Wright, Jr.,** succeeds Wells as scout and leaseman. In Denver, **Lewis F. Penwell** becomes titleman of Conoco's regional office. He replaces **E. A. Luckemeyer,** who has been moved to Bismarck, N. D., as scout and leaseman.

RICHARD S. HICKLIN is transferring to Denver as exploration manager of the western division of Carter Oil Co. He is replacing **John L. Cook,** who is moving to Billings (Mont.) to manage the company's northern division. **Jerry R. Kyle** succeeds Hicklin as division exploration manager in Oklahoma City. **E. S. Conway** replaces Kyle as division geologist.

H. F. TOMFOHRDE, JR., will manage the newly created transportation and supply department for Tidewater Oil Co.'s eastern division, in New York. He will be succeeded by **Leonard W. Doolan, Jr.,** as manager of the divisional lubricants supply department. Doolan formerly served as supervisor of the process section in lubricants supply. In his new position, Tomfohrde will direct operations of the marine, traffic, bulk terminal planning, purchasing, inventory control, engineering, and building maintenance departments; and Tide Water Pipe Co., Ltd., and the pipelines section.

HAROLD R. KEMMERER will manage the products application department of Shell Oil Co., New York. He succeeds **A. B. Culbertson,** who is retiring after 33 years' service with the company. **J. D. Heldman,** special technologist in the manufacturing operations department, replaces Kemmerer as assistant manager of the manufacturing research department.

N. B. VENUS will manage the district exploration office at Salt Lake City for Tennessee Gas Transmission Co. **Joe Wolf** is transferring from TGT's Wichita (Kan.) office to Casper, Wyo., as district exploration manager. Venus was formerly located in Denver.

J. H. LOLLAR, JR., has been elected treasurer of Triangle Refineries, Inc., Houston, a wholly-owned and separately operated subsidiary of Kerr-McGee Oil Industries, Inc.

F. H. Wilson

H. H. Neel

HENRY H. NEEL has been named to the newly created post of manager of foreign exploration of Tidewater Oil Co., in San Francisco. He will be succeeded as western division exploration manager by **F. HUGH WILSON.** Wilson has been chief geologist of the southern division, in Houston, for the past 2½ years. In his new position, Neel will be responsible for planning, coordinating, and operating Tidewater's oil and gas exploratory program, which presently includes interests in Guatemala, Iran, and Turkey.

FLOYD W. BULES is the new assistant general manager of Pure Oil Co.'s retail marketing division, Chicago. He will be in charge of field operations and will assist the assistant vice-president of retail marketing. **Frank H. Allen** is succeeding Bules as general manager for the north, in charge of a 12-state area. Allen will be succeeded as manager of southern retail operations, in Atlanta, Ga., by **John C. Dial.** Replacing Dial as southeastern division manager also in Atlanta, is **John O. Little. George S. Willcox, Jr.,** becomes eastern division manager in Charlotte, N. C., succeeding Little. Willcox was formerly assistant manager of the southwestern division, in Birmingham, Ala.

F. W. Bules

A. S. Anderson

ALAN S. ANDERSON has been elected a director of Coastal States Gas Producing Co. He is a petroleum economist with Paine, Webber, Jackson & Curtis, New York. He is also past president of the New York Oil Analysts Group, a director of Coastal Caribbean Oils, Inc., and a voting trustee of Canada Southern Petroleum, Ltd., and Canso Natural Gas, Ltd.

RALPH ROYCE and **GEORGE S. ENGLE** have been elected board chairman and president, respectively, of Columbus Rexall Oil Co., an independent with 25,000-bbl. monthly production in western U. S. and the Caribbean. Royce is a retired Air Force major general; Engle a veteran oil man, who operates the Coconut Grove Playhouse. Both men are located in Miami, Fla.

C. W. HAMILTON, vice-president of Gulf Oil Corp., and board chairman of Gulf Eastern Co., London, has retired, and is planning to reside in Upper Montclair, N. J. His duties with Gulf Eastern already have been assumed by **Albert Gregersen** as vice-president (PW — Apr.26'57,p72). Hamilton began his oil career over 41 years ago as chief geologist for Mexican Gulf Oil Co. Prior to his retirement, Hamilton had been devoting his efforts to enlarging and strengthening the organization for the handling of Gulf's exploration and production interests in the Eastern Hemisphere.

ROBERT H. COBB has been made division landman of the Rocky Mountain area for Republic Natural Gas Co., at Denver. He is transferring from the land department of the company's Dallas office.

E. R. Filley

C. B. Barrett

J. T. Wood, Jr.

T. A. Mangelsdorf

THE TEXAS CO. has made seven high-level appointments. Four new senior vice-presidents are **Claud B. Barrett,** formerly vice-president at Houston, also named chief executive officer in that city; **Everett R. Filley,** formerly vice-president in charge of domestic production, now in charge of worldwide production; **Theodore A. Mangelsdorf,** formerly vice-president, now in charge of world-wide refining; and **James T. Wood, Jr.,** formerly vice-president at Los Angeles, also named chief executive officer in that city. Three newly elected vice presidents are **J. B. Christian,** formerly chairman and managing director of Trinidad Oil Co., Ltd., now in charge of Trinidad operations, in New York; **L. C. Kemp, Jr.,** formerly general manager of the petrochemicals department now in charge of that department; **J. Howard Rambin, Jr.,** formerly assistant to Filley when he was vice-president in charge of domestic production, now in charge of that department.

FRANK JOHNSON has resigned as landman of Sohio Oil Co.'s Gulf Coast division, to become executive vice-president of Durbin Bond & Co. Durbin Bond is an independent producer and operator, with production in the Mid-Continent and southeast areas of the U. S. Johnson will make his headquarters in Little Rock, Ark.

G. G. BILLINGS has been promoted to manager of Shell Pipe Line Corp.'s operating service department in Houston. He is being replaced as manager of the company's West Texas area, in Midland, by **H. E. White.** White has been assistant manager in Midland since 1954.

EDD R. TURNER, JR., is the newly appointed divisional geologist of Tidewater Oil Co.'s southern division, in Houston. He replaces **F. Hugh Wilson,** who is transferring to the company's western division, in San Francisco, as divisional exploration manager. Prior to the promotion, Turner was exploitation geologist for the company.

A. V. ROBERTSON COE has been named acting district geologist for Husky Oil Co.'s Cody (Wyo.) district. He will be assisted by **Raymond E. Maret,** who joined Husky as a geologist in May, 1956. **Stephen J. Duggleby** has been named chief pilot. He replaces **T. D. Monroe,** who has resigned.

DR. E. C. HUGHES, Standard Oil Co. (Ohio), has been named chairman of the advisory committee of the American Petroleum Institute's Research Project 45. He is succeeding **Dr. Wheeler G. Lovell,** Ethyl Corp. Research Project 45 has been concerned with the study of synthesis, purification, and properties of hydrocarbons of low molecular weight.

J. R. OWEN will manage sales for Speed Oil Co., Tallahassee, Fla., a marketing subsidiary of Bay Petroleum Corp. For the past eleven years, he has been a member of Carter Oil Co.'s marketing department in Denver.

GORDON BUSSEY has joined the pricing division of Bay Petroleum Corp.'s marketing headquarters, in Denver. He was formerly executive director of the Colorado Petroleum Marketers' Assn.

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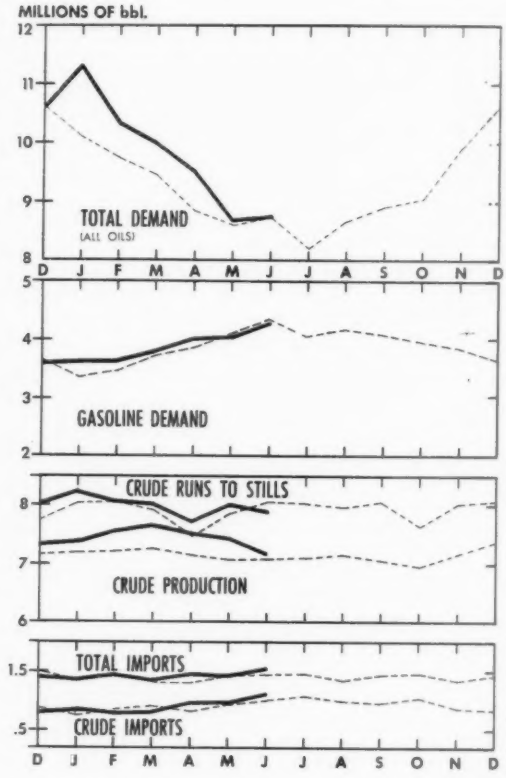


TOTAL DEMAND
Latest week average 8.718
Year ago 8.653

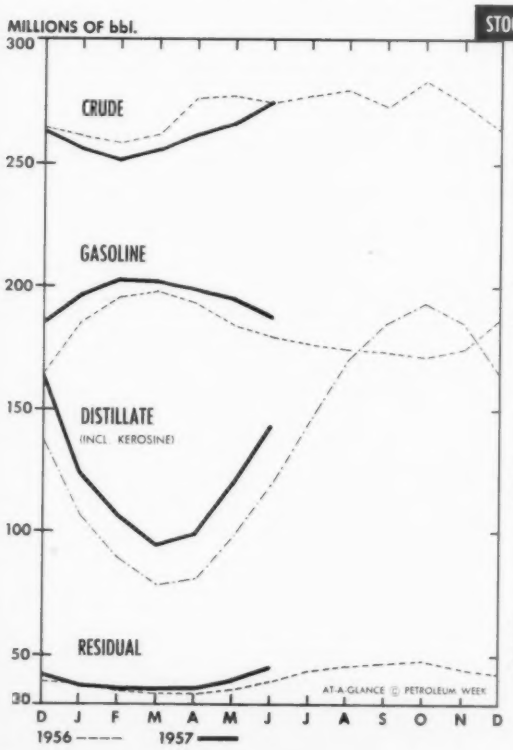
GASOLINE DEMAND
Latest 4-week average 4.261
Year ago 4.238

RUNS TO STILLS
Latest week 7.840
Previous week 7.915
Year ago 7.974

CRUDE PRODUCTION
Latest week 6.952
Previous week 7.190
Year ago 7.086

TOTAL IMPORTS
Latest week 1.641
Previous week 1.784
Year ago 1.426

CRUDE IMPORTS
Latest week 1.269
Previous week 1.221
Year ago 1.032



CRUDE STOCKS
Week-ended 6-29 277.3
Previous week 273.2
Year ago 275.0

GASOLINE
Latest week 185.9
Previous week 188.5
Year ago 178.5

DISTILLATES
Latest week 148.2
Previous week 143.2
Year ago 125.1

RESIDUAL
Latest week 46.2
Previous week 44.7
Year ago 39.8

Crude inventories, which have been rising fast during the past two months, will continue upward in July despite a reduction in domestic crude production.

At the end of June, the above-the-ground supply of crude amounted to at least 278-million bbl., a gain of 18-million bbl. since the first of the year. When later data are available, it is likely that the end-of-June total may prove to be as high as 280-million bbl.

Despite the extra export demand for crude in the first half, present stocks are 2-million bbl. above a year ago.

Domestic crude output in July will average a little below 7-million b/d. But crude imports are scheduled to reach a new peak of about 1.3-million b/d, bringing total new crude supply up to the June level.

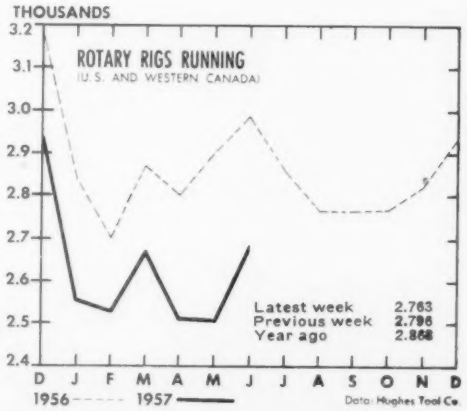
July refinery runs are estimated at 7.9-million b/d, or about equal to the average of last month. Crude stocks last month increased at least 8.2-million bbl.

The expected rate of total new supply indicates a sharp increase in products stocks—as well as crude stocks—in July.

The rate of new supply, including domestic production of crude and gas liquids and imports of crude and products, is expected to average about 9.5-million b/d, about equal to June.

But demand in July is normally at the lowest level of the year, running considerably below June. And total inventory accumulation (crude and products) in June averaged more than 800,000 b/d.

While inventories normally rise in the low-demand summer months, additions to the already more-than-ample stocks will bring pressure on prices. Price weakness already has hit the middle distillates, which fell in several areas this week (page 6).


THOUSANDS
ROTARY RIGS RUNNING
(U.S. AND WESTERN CANADA)
Latest week 2.763
Previous week 2.796
Year ago 2.868
D J F M A M J J A S O N D
1956 ----- 1957 ——
Data: Hughes Tool Co

The Market Trend

Producers' Hope: Tankers Go to Layup

Southwest producers can draw a measure of hope from the recent move to lay up tankers. For low allowables in Texas have a curious habit of happening in times of low tanker rates.

Last week, British Petroleum withdrew nine tankers from service, the first such action in over a year. The company has full stocks of crude in the Falmouth area of Britain, and the tied-up tankers will be used as floating storage.

BP's move touches on the current slackness in oil markets: everybody has too much oil, too much transportation. There's plenty of crude in Europe (PW—Jun.21'56,p64). The Far East appears covered on black oils until fall. The U. S. East Coast is well stocked with clean products.

But the one trade that's workable—Persian Gulf to U. S. East Coast —is the one that backs up oil in the Southwest. For, with charter rates hovering around USMC—50%, East Coast refiners can land Persian Gulf crude in spot charters on a par with wellhead prices in Texas (PW—Jul. 5'57,p54).

Thus, it can almost be said that high tanker rates are a true aim of Southwest producers, for they tend to shut off oil deliveries to the U. S. from far-off producing fields. Stated another way, about the only sure method of holding down the flow of Persian Gulf crude to the U. S.—short of government edict—is for tanker rates to get strong.

Layups eventually can make for strong ship rates, but it's a long and tortuous route. For one thing, tanker owners often will operate ships for several months at a loss, hoping for a turn in the market. When ship rates collapsed after the Korean War, it took two years of weak markets before the number of idle ships reached their peak.

No U. S. company as yet has announced tanker layups. But one operator admitted he was loosing $56,000 a month on the operation of a single supertanker. Layups, many in the trade feel, will start soon, and in volume.

Chicago Resids Off:

A long-expected drop in the Chicago residual market came last week when two big sellers cut prices 0.25¢. New prices for No. 6 fuel in transport lots ranged from 8.35¢ to 8.7¢ a gal.

Jobbers did anything but hail the move, for they lost a measure of their margin. While the f.o.b. terminal prices were falling 0.25¢, delivered tank wagon prices generally slipped 0.5¢.

Gasoline Is Still Easy:

The July 4th holiday came and went without any real firming in the gasoline markets. Gulf Coast cargo prices were trying to look stronger, but refiners for the life of them couldn't cite a higher sale.

River gasoline looks better, too. But Chicago sellers still point to discounts ranging from 0.25¢ to 0.275¢ available at the Franklin Park terminal.

Prices Off In Canada:

Lower tanker rates and recent declines in light fuel oil prices at the U. S. Gulf caused cuts this week in prices in eastern Canada. Imperial Oil reduced 0.5¢ a gal. for kerosine, No. 2, and diesel fuel in Quebec, the four Atlantic provinces, and much of Ontario.

The Market Place AROUND THE WORLD

Prices compiled for PETROLEUM WEEK by Platt's OILGRAM Price Service and National Petroleum News, McGraw-Hill Publications

All Prices of July 8

Bold face type indicates changes from previous week

KEY PRICES—REFINED PRODUCTS

(¢ per gal. except dollars per bbl. where $ is shown)

Western Hemisphere

U.S. Gulf Coast, cargoes
- Gasoline, 98 oct prem. 13.5-14.375
- Gasoline, 92 oct reg. 11.5-12.625
- Kerosine 9.625-11
- Heating oil, No. 2. 9.5-10.5
- Gas oil, 48-52 d.i. 9.75-10.625
- Fuel oil, bunker "C". $2.75-3.15

Caribbean, cargoes
- Avgas, Grade 100/130. 17.5
- Gasoline, 93 oct research prem. 11.75
- Gasoline, 87 oct research reg. 10.875
- Gasoline, 79 oct research. 10.125
- Gasoline, 70-72 oct motor method. 9.75
- Kerosine 9.625
- Heating oil, No. 2. 9.5
- Gas oil, 48-52 d.i. 9.75
- Fuel oil, bunker "C". $2.55

New York Harbor, barges
- Kerosine 11.5-12.45
- Heating oil, No. 2. 10.85-11.85
- Fuel oil, No. 6. $3.10-3.15

Okla-Group 3, northern, shpt, bulk
- **Gasoline, 89 oct reg. 11.75-12.25↓**
- Kerosine 10.125-10.875
- Heating oil, No. 2. 9.125-10.25
- Fuel oil, No. 6. $2.15-2.45

Chicago, bulk
- Gasoline, 91 oct reg. 13-13.8
- Heating oil, No. 2. 10-10.65
- **Fuel oil, No. 6 high sulfur. 8.35↓-8.7**

Los Angeles, rack
- Gasoline, 84 oct reg. 13.6
- Diesel fuel, PS 200. 10-11.25
- Light fuel, PS 300. $3.40-3.65
- Heavy fuel, PS 400. $2.85-3.05

Natural Gasoline, Grade 26-70
- FOB Group 3. 4
- FOB Breckenridge, Tex. 3.5

LP-Gas
- Propane, Oklahoma (Group 3). 3.5-5

Penna Lubes
- Bright stock, 25 p. t. 27
- 200 vis. neutral, 25 p.t. 25

Mid-Continent Lubes, Tulsa basis
- Bright stock, solvent, 95 v.i. 25.5-26.5
- Neutral, solvent, 200-210 vis. 21.25-22.25

Gulf Coast Lubes
- Bright stock, solvent, 95 v.i. 26.5
- Neutral, solvent, 200 vis. 23

Eastern Hemisphere

Singapore (Pulau Bukom), cargoes
- Avgas, grade 100/130. 18.875
- Gasoline, 79 oct research. 10.75
- Kerosine 11
- Gas oil, 48 d.i. minimum. 10.875

KEY PRICES—CRUDE OIL

(2¢ differential per deg. of grav. applies except as noted)

Western Hemisphere

United States (at the well)
- Mid-Continent, 36.0-36.9. 3.07
- North Dakota, 36.0-36.9. 3.07
- Texas:
  - Gulf Coast, low cold test, 26.0-26.9. 3.50
  - G. Coast, upper & lower, 26.0-26.9. 3.07-3.22
  - West Texas, sweet, 36.0-36.9. 3.07
  - West Texas, N. M. inter., 36.0-36.9. 3.00
  - West Texas, N. M., sour, 32.0-32.9. 2.86
  - East Texas, flat. 3.25
  - Mirando, 28.0-28.9. 3.51
- Illinois Basin, flat. 3.15
- Pennsylvania Grade, Bradford dist. flat. 4.88
- California, Signal Hill, 21.0-21.9. 2.93†
- North Louisiana-Arkansas, 36.0-36.9. 3.20
- Wyoming sweet, 36.0-36.9. 3.00
- Wyoming sour, 32.0-32.9. 2.71

Canada (flat prices, at the well)
- Acheson-Stony Plain (Alta.). 2.72
- Leduc-Woodbend (Alta.) 2.78
- Redwater (Alta.). 2.67
- Daly (Man.). 2.52
- Smiley, Sask.). 2.44

Venezuela (Cargoes, FOB lifting port designated)
- Cumarebo, 48.0-48.9, Tucupido. 3.75
- **San Joaquin, 41.0-41.9, Puerto la Cruz. 3.34↓**
- Oficina, 35.0-35.9, Puerto la Cruz. 3.05
- Tia Juana, Medium, 26.0-26.9, Amuay. 2.55
- Bachaquero, flat, Amuay, Las Piedras. 2.23
- Tarra, 38.0-38.9, San Lorenzo. 3.08
- Lagunillas Heavy, flat, Amuay Cardon 2.38 2.20

†Differential per deg. of grav. varies.

Eastern Hemisphere

Middle East, Persian Gulf (Cargoes, FOB lifting port)
- Arabia, 34.0-34.9, Ras Tanura. 2.08
- Safaniya, 27.0-27.9, Ras Tanura. 1.79
- **Iran, 34.0-34.9, Bandar Mashur. 2.04↑**
- **Iran, 34.0-34.9, Abadan. 1.99↑**
- Iraq, 35.0-35.9, Fao. 1.98
- Kuwait, 31.0-31.9, Mina-al-Ahmadi. 1.85
- Qatar, 41.0-41.9, Umm Said. 2.20-2.23

Middle East, Eastern Mediterranean
- Arabian, 36.0-36.9, Sidon. 2.69
- Iraq, 36.0-36.9, Tripoli, Banias. 2.69

Far East, Cargoes, FOB Lutong, Sarawak
- Seria Light, 37-38. 2.75

KEY TANKER RATES

(Last paid, per long ton, single voyage)

- **U.S. Gulf-N. Y., clean. (USMC —15%) $2.42↑**
- U.S. Gulf-N. Y., dirty. (USMC —27½%) $2.97
- NWI-USNH, dirty. (USMC —45%) $1.49
- NWI-UK/Cont., dirty. (Scale —10%) 29/3*
- Persian Gulf-UK/Cont., dirty. (Scale —17½%) 45/9*
- Persian Gulf-USNH, dirty. (USMC —50%) $6.35

**Sterling*

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Chicago 11 — W. F. Holbrook, 520 North Michigan Avenue, Mohawk 4-5800

Cleveland 15 — J. E. MacArthur, 1510 Hanna Bldg., Superior 1-7000

Denver 2 — John W. Patten, 1740 Broadway, Alpine 5-2981

Houston 25 — D. O. Hanson, 724 Prudential Bldg., Jackson 6-1281

Los Angeles 17 — Peter S. Carberry, 1125 W. Sixth St., Madison 6-9351

New York 36 — Edward A. Callahan, Jr., Donald R. Thompson, 500 Fifth Ave., Oxford 5-5959

Philadelphia 3 — W. A. Potter, Architects Building, Rittenhouse 6-0670

San Francisco 4 — William C. Woolston, 68 Post Street, Douglas 2-4600

Tulsa 19 — J. A. Hartley, 209 Constantine Bldg., 611 South Boston, Gibson 7-5594

England, London E. C. 4 — Herbert Lagler, McGraw-Hill Co., Ltd., 95 Farringdon St.

DEPT/Service & Equipment Companies

DR. ALFRED SAFFER, assistant vice-president, will head the newly opened plant in northern New Jersey of Scientific Design Co. It will produce catalysts commercially for SD-developed processes. Until now, SD has offered process responsibility, design and engineering of the plant, erection of the plant through its construction subsidiary, plant start-up and training of personnel, and initial production operation. The new plant will enable the company to assume complete responsibility for all phases of an ethylene oxide project. Other new appointments are **Thomas P. Brown** and **Walter N. Alexander,** senior vice-presidents; **Henry F. Peters, David Brown,** and **Philip E. Newman,** vice-presidents of engineering, research and development, and European affairs, respectively. Brown was formerly vice-president of new projects; Alexander executive vice-president of SD Plants, Inc., construction subsidiary; and Peters, Brown, and Newman assistant vice-presidents.

Dr. A. Saffer

R. L. Rice

ROBERT L. RICE is the new general sales manager of Fischer & Porter Co., Hatboro, Pa., manufacturer of complete process instrumentation. For the past three years he has managed the company's water and waste division.

W. E. WOTRING is the new project manager of National Supply Co.'s electronics planning group, succeeding **B. M. Rowles,** who has resigned. Since 1956, Wotring has been a member of the electronics planning staff, at the company's Pittsburgh headquarters.

W. E. Wotring

B. R. Doak

BARNEY R. DOAK will manage Canadian sales and service for W-K-M, a division of ACF Industries, Inc., in Houston. He was formerly a sales engineer with Parkersburg Rig & Reel Co. W-K-M manufactures valves and fittings for the oil and gas industry.

E. H. CLARK is the new chief research engineer for Baker Oil Tools, Inc., Los Angeles. With the company for ten years, Clark has served as assistant chief engineer for the past four years.

E. H. Clark

E. E. Benninger

E. E. BENNINGER, Baker Oil Tools, Inc., is holding the I. Frank Brown memorial trophy awarded him by the New York chapter of the Nomads for low net score at the association's annual spring golf tournament. Other prize winners were: **R. T. Meek,** Ladish Co.; **C. R. Eble,** H. P. Sherman Co.; **F. G. Shlemmer,** Pacific Valves, Inc.; **F. W. Stopinski,** Esso Standard Oil Co.; **H. Kennedy,** Sinclair Oil & Refining Co.; **J. E. George,** Mid-Continent Supply Co.; **J. S. Moore,** Chain Belt Co.; **E. Carney, Jr.,** Export Oil Field Sales, Inc.; **J. J. Flannery; Jerry Brennan,** Arthur G. McKee & Co., **W. H. Dickinson,** Esso Research & Engineering Co.; **W. E. Volkman,** Cardwell Mfg. Co.; **H. Leonard; R. E. Kramer,** Hammond Iron Works; **B. Ford,** Derr Oliver, Inc.

PAUL R. SHAWVER will manage the Cedar Rapids (Iowa) manufacturing plant of Square D Co., manufacturer of circuit breaker components. He succeeds **C. Howard Brittenham,** who has resigned to become vice-president of Yuba Consolidated Gold Fields, San Francisco. Shawver was formerly assistant to the vice-president of the company's distribution equipment division, in Detroit.

DR. BERNARD WOLNAK will head the research staff of the newly established research and development department of Tapecoat Co., Evanston (Ill.) manufacturer of coal-tar coating in tape form. Development will be directed by **John Branca,** chief engineer in charge of this activity. The new department's initial research will be concerned with protective coatings for pipe, pipe joints, fittings, and couplings.

HAROLD G. LINES has been named sales engineer of Plibrico Co., manufacturer of refractory products. Lines, formerly midwestern district sales manager for Magnetic Metals Co., will service refineries, steel mills, and cement plants in the Hammond (Ind.) and Chicago areas for Plibrico.

BOB SCOTT, oilfield service engineer for Baker Oil Tools, Inc., is being transferred from Glendive, Mont., to Williston, N. D.

T. L. FONTAINE, JR., will manage oilfield equipment sales for the Houston district of ALCO Products, Inc. For the past 1½ years, he has been in oilfield sales with the company. **John P. DeLaney,** former general manager of the company's transportation division, has been elected a vice-president, in New York. He will be in charge of operations in both the transportation division, Schenectady, N. Y., and the spring and forge division, Latrobe, Pa., and Chicago Heights, Ill.

T. L. Fontaine, Jr. G. W. Stevenson

GEORGE W. STEVENSON is a newly elected vice-president of American Meter Co., Los Angeles. Since 1954, he has been manager of West Coast operations. Stevenson will continue to be in charge of sales and manufacturing activities in Washington, Oregon, California, Arizona, Nevada, Idaho, and Hawaii. American Meter manufactures measurement equipment for the gas, oil and chemical industries at 11 plants throughout the U. S. and Canada.

HUNTING TECHNICAL & EXPLORATION SERVICE, LTD., Toronto, is opening a new branch office in Calgary to provide photogeological services to the oil industry. The new office location will be on the site of the former V. C. Miller & Associates, Photogeologists, Ltd. All Miller employees will be retained by the Hunting company.

ROBERT R. MAWSON has been appointed to the newly created post of sales manager of transducer products for Consolidated Electrodynamics Corp., Pasadena, Calif. He joined the company in 1951 as an engineering aide. Since then, he has advanced to supervisor of the test laboratory, application engineer specializing in pressure-sensing devices, and project chief for special electronic pressure-sensing equipment.

JIM FARMER will manage sales at the newly opened Bakersfield (Calif.) office of P & H Valve, Inc. The company specializes in field service, and valve exchange, repair, and maintenance.

FORREST BERMELL will manage the Cody (Wyo.) store for National Supply Co., succeeding the late **Jim Girty.** He was formerly in Williston, N. D. for the company.

CLYDE M. LACKEY is transferring to Wichita (Kan.) headquarters of Cardwell Mfg. Co. as domestic sales manager. He formerly managed the Illinois basin district for the company.

R. L. GIBBINS has been appointed special representative of BrakeSol, Inc. From Dallas headquarters, he will acquaint oil men with the uses of BrakeSol for the control of paraffin. Gibbins was formerly in the sales department of Lone Star Steel for three years.

MORRIS L. CHOATE will manage the Ponca City (Okla.) store of Oil Well Supply Division, U. S. Steel Corp. **Harman Holcomb Jr.**, field representative for the company, has transferred from Denver to Beaumont, Tex.

ORONITE CHEMICAL CO. has moved its district headquarters from Dallas to Houston. **L. G. Oleari** will continue to serve as district sales manager.

THE NOMADS, Los Angeles chapter, played host recently to **Wanda Jablonski,** (center), senior editor of Petroleum Week. As guest speaker at a meeting, she gave a first-hand account of her trip through the Middle East, and of the Arabian situation. Nomads shown with her are (l. to r.) **Earl Daniels,** Hydril Co., program chairman, and **Bob Gaylord,** Wagner-Morehouse, Inc., president of the chapter.

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LP-Gas man needed who has experience in management of direct retail and dealer sales, as well as bulk plant administration and operations. Prefer man who has lived in Latin America and has a good knowledge of the language and customs of that area. Wonderful opportunity for the right man. Age 35-45 preferred. Provide complete resume of background. All communications confidential.

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USED—GOOD CONDITION

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Promotion Assistant—Leading New York firm has excellent opportunity for man with market research background or knowledge of petroleum industry. Advertising background helpful. To develop materials for advertising programs, sales aids, direct mail, etc. Excellent growth possibilities. Write fully outlining experience, salary requirements. P-5462, Petroleum Week.

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Now a Price on Free Speech?

IT WOULD BE FUNNY if it weren't so serious. Now oil has to defend the right to defend itself.

This need stems from a possible change in the tax law that would becloud the oil man's freedom, or that of any businessman, to speak out. Listen to this section of a proposed revision of the Internal Revenue Code:

> "Expenditures for lobbying purposes, for the promotion or defeat of legislation, for political purposes, or for the development or exploitation of propaganda (including advertising other than trade advertising) relating to any of the foregoing purposes, are not deductible from gross income. No payment made, either directly or through any organization, for the purpose of attempting to promote or defeat legislation shall be deductible . . ."

Take a second reading of those words "relating to any of the foregoing purposes." Just what does that mean? For oil companies, it means a threat to institutional advertising and to a wide range of public relations efforts. That's because almost any of these activities, aimed largely at building public understanding, can be "related" in some way to legislation or politics.

WHAT IF AN OIL COMPANY has an institutional advertising campaign explaining to the people the danger to their economic well-being in excessively high corporation taxes? And what if a bill is introduced in Congress to raise taxes? Obviously there are those in Washington who would construe the advertising program as aimed at the "defeat of legislation."

There should be no hiding the fact that the issue is money. But a lot is at stake in defending stockholders' interests against unwise political attacks. Such a defense costs money. It's a legitimate cost of doing business if we have ever heard of one. And the right to charge off such a cost should not be left hanging in the air.

THE GOVERNMENT HAS A POINT in excluding from allowable business expenses any contributions to political parties for political purposes. And it is justified in disallowing contributions for lobbying if —as defined by the Supreme Court—lobbying is the direct solicitation of a vote on legislation, or communications requesting a vote.

Period.

Beyond this, oil men as well as all other Americans should be encouraged to speak their minds—without having to pay for it.

Engineered to handle the longest drill-pipe strings and heaviest casing programs

First 500-ton Hook!

BJ "5500" HYDRAPLEX

Once again Byron Jackson gets to the petroleum industry first with the most. This time it's the first 500-ton capacity hook – a new concept in hook design with super-strength for safely handling the longest strings of drill pipe and casing ever run or contemplated!

The new tool is much more than a beefed-up version of the hooks you're used to seeing on drilling rigs. It was engineered from the ground up by BJ specialists. The result is Model 5500, a handsome giant, which no more resembles yesterday's hooks than today's automobiles resemble grandpa's buggy.

And the "5500" is packed with features that make drilling easier and safer. It has the patented BJ Hook Positioner which automatically turns the elevator handles toward the derrickman and takes the fumble out of pipe handling. There's the exclusive Hydraulic Snubber . . . no more drill pipe bounce, battered joints, nor high maintenance.

With the "5500" there's no lopsided elevator loading or swing and sway. A massive flexible pin connection allows an uneven load to automatically correct itself.

There's plenty of weight . . . 9950 pounds! It falls fast and straight even when the largest diameter lines are used. There's unmatched strength . . . a 500-ton API-rated capacity to give strength to spare in today's deep offshore and onshore operations.

For further information, ask your BJ field representative or write for the new Hydraplex bulletin.

BJ's Exclusive Hook Positioner is one Safety Device That's a Real Work Saver!

Taking the lead in supplying the industry with the heavier-duty equipment it needs, BJ recently introduced the first 500-ton capacity elevator-spider in a unique combination tool that serves in either function. The new 500-ton hook is another in the BJ line of larger, safer, stronger equipment that will one day be an absolute "must" for all deep drilling operations.

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WATCH BJ FOR THE NEWEST

SD's American Clients

This partial list of SD's American clients is another indication of leadership as an independent engineering company in the field of organic chemicals, including important petrochemicals. Since its founding in 1946, SD has undertaken a greater number and variety of organic chemical projects than any other independent engineering firm. SD's services are available on a completely confidential basis— from process development and engineering through construction by its wholly owned subsidiary, SD Plants, Inc.

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SD128.

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Each one's different and there are many variations within each general formation.

That's why Dowell has developed eight basic fracturing services—each for a specific purpose in stimulating well production. Also, numerous chemical additives have broadened the range of these *basic* treatments to make them even more effective in widely-varying formations.

But Dowell is not stopping here. Still better materials, techniques and equipment are being developed by Dowell's field and laboratory research groups. The Dowell organization—chemists, engineers, field personnel—is a team you can count on to help you unlock *your* formation. Dowell Incorporated, Tulsa 1, Oklahoma.

*Service Mark of Dowell Incorporated

Services for the oil industry

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